

BRITISH DAIRYIN



April 2024 Vol 30, No.6

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LAMENESS SPECIAL

■ Getting a more technical view on hoof health

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Charlotte Lawder is part of the Gold Cup-winning Bisterne Farms team, who have a keen eye for cow welfare and a simple approach to farm management. Read more about them on pages 34-38.

Looking at the positives

I feel a bit conflicted this month, if I'm being honest. Sitting here, looking out of the window at yet another wet and dismal day, I – like most of you, I'm sure – am wondering if it's EVER going to stop raining. I'm sick to death of it, and I don't even have cows to turn out. So for those of you who are running out of forage, have fields rotting under standing water and slurry stores bursting at the seams, I can only imagine how much worse it feels. If you need help – whether that's physical or mental support – please do contact the farming charities like FCN, Forage Aid and RABI.

But then there's another part of me that's feeling really upbeat. The hedges are greening up, milk prices are looking a bit more positive and the first swallows have arrived. I've also had a couple of fantastic meetings, from which I came away on a real high. So I'll share a bit of that with you – I hope, in some small way, it helps!

The first was a visit to Bisterne Farms, winners of the RABDF / NMR Gold Cup. As an agricultural journalist I love nothing more than getting out to have a look round a top-class farm and meet the people running it. And Bisterne did not disappoint. What a lovely group of young people – forward-thinking, open-minded and hard-working, with a keen eye for cow welfare. And their approach is clearly paying dividends in exceptional health, fertility and productivity. You can read all about them on pages 34-38, and head along to find out more yourselves at the Gold Cup Open Day, which is being held on May 22.

The second meeting was at the Farmers' Club in London and comprised a lively group of farmers, consultants and others from across the dairy industry. This was a meeting that has been a long time in the making – British Dairying's first editorial steering panel. Following the reader survey we undertook last year, we pulled together a cross-section of representatives to come together and discuss the challenges and opportunities facing the sector, to ensure that we're meeting your needs, both now and in the future.

And, boy, did they deliver! It was hands-down the most inspirational few hours I've had the privilege to be part of in a long time. Bringing together viewpoints from younger and older generations, small-scale to large, new entrants to family farms, and tenanted to owned, it really was a microcosm of our diverse industry. The ideas flowed apace and the positivity was palpable.

So, what did I draw from it, apart from a very long to-do list? Well, it's clear that farmers really do value British Dairying and see us as a supportive partner to the sector. Thanks can only go to former Editor Mike Green and Publisher Alan Whibley for building that reputation. It's also clear that times are changing and there's always more we can do to add value to your businesses. So look out for a few new special features in the year ahead – I'm genuinely excited about putting those ideas into practice.

Olivia Cooper

Managing Editor

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DAIRYING

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Think carefully before committing to SFI

Dairy farmers in England have good opportunities to incorporate several Sustainable Farming Incentive (SFI) actions into their systems. But they should think carefully about entering the scheme without considering the impact it could have on farm output.

That's according to Independent Nutritionist Hefin Richards from Rumenation Consultancy, who said farmers must not "get blinded by the urge to maximise SFI". Instead, they should properly examine how the changes will affect forage quantity and quality and subsequent animal performance.

"As tempting as it is to try and tick enough boxes to match the loss in the Basic Payment Scheme (BPS), it is important to consider SFI in relation to the gross turnover of the core enterprise," he stressed. "Farmers should consider the SFI scheme as a pick-and-mix, not an all-you-can eat buffet."

For example, while multi-species leys can be useful on low-input, drought-prone fields, they also have the potential to reduce overall silage yields. And replacing maize with spring cereals could leave a forage shortfall and affect where and when slurry can be spread, impacting storage requirements.

So producers should embrace the right parts of the scheme for the right business reasons, said Mr Richards. "I



Producers should embrace the right parts of the scheme for the right reasons

have seen recommendations where I have real concerns regarding the potential downside to the wider business. It is better to incorporate any easy wins into the system and then consider options for adjusting traditional farm practices without compromising forage production."

William Fleming, Area Manager at Germinal, said SFI presents a good opportunity to reward farmers for producing food sustainably.

However, SAM3 multi-species leys will require different management, and mixtures must be carefully considered to get the best outcome.

"Chicory should be left out of silage mixtures because it produces lignified seed heads which animals won't eat," he said.

Buying 'SAM3 compatible' mixtures may also not be the best approach for the farm, warned Janet Montgomery at Barenbrug. While

Defra has issued guidelines as to what will constitute a 'herbal ley' under the scheme, those guidelines are not yet mandatory.

"While a seed mixture that has been constituted to tick boxes against the SAM3 guidelines may serve to meet the bare minimum required by the guidelines, it risks doing little or nothing to achieve the full intention of a herbal ley; environmentally or agronomically," she said.

"The best herbal leys deliver improvements in soil health, structure and fertility, and increased biodiversity, while remaining agronomically productive. That's the true spirit of the SFI: Delivering environmental benefits with approachable principles that continue to deliver productivity as part of a conventional farming system.



Janet Montgomery, Barenbrug

Golden Hooves spreading its wings



Golden Hooves regenerative cheddar, first launched by First Milk in spring last year, now has listings with five new wholesalers and is in retail outlets across GB.

The cheese was launched to celebrate the work of the co-op's farmers and fly the flag for regenerative dairy farming in the marketplace. Since then, the mature cheddar is said to have carved out a strong position in deli counters. It was later joined by a vintage cheddar, which won a Gold at this year's British Cheese Awards.

It was listed in the Good Shopping Guide's Top 200 ethical businesses for 2024 and more products are soon to be released.

The five new wholesalers now listed are Rowcliffe, Curd and Cure, the Cress Company, Caws Cymru and Blas Ar Fwyd.

Golden Hooves says its farms are taking steps to continually encourage plant and wildlife biodiversity, protect the soil and maintain living roots, helping to sequester carbon into the soil.

New green loan for sustainable farming

Discounted lending is being made available by the Agricultural Mortgage Corporation for farmers and rural businesses in transition to more sustainable practices.

The Clean Growth Financing Initiative (CGFI) carries a zero per cent arrangement fee and can be used to finance a broad range of green investments, from the purchase of low-carbon machinery to renewable energy infrastructure.

"CGFI can be considered for a wide range of sustainable and diversification investment options, including energy supply upgrades like solar panels and heat pumps," said AMC's Lee Baker.

Other options include adding eco-pods or sustainable camping to their farm, enhancing wastewater

treatment systems, or enabling more sustainable production methods.

"These will help customers stabilise their energy costs and operate more sustainably, both in terms of the environment and financially, which are both vital steps towards future-proofing farms and businesses," he added.

The organisation is already partnering with the Soil Association Exchange in offering a free-to-use platform to help farmers to implement transition practices across six critical farming areas: Soil health, carbon, water, biodiversity, animal welfare and social impact.

This enables access to financial incentives as well as providing a consultancy service to AMC's largest clients.

Defra finally opens flood fund

The Government has finally opened the Farming Recovery Fund to support farmers who suffered uninsurable damage to their land due to flooding this winter.

Under the scheme, eligible farmers can access grants of between £500 and £25,000 to return their land to the condition it was in before exceptional flooding due to Storm Henk.

The announcement came shortly after the Country Land and Business Association (CLA) called out the Government for not opening the Fund – which was announced three months ago – quickly enough.

“The impact of flooding on farm businesses up and down the country is profound,” said CLA President Victoria Vyvyan. “Crops and livestock have been badly affected, and any reduction in domestic food production may lead to an increase in imports and prices.”

The Fund has been created to help with the repair, as part of the broader Flood Recovery Framework, which is activated following severe flooding. Eligible farmers are being contacted



The impact of flooding across UK farmland this winter has been profound

directly by RPA, outlining the support available to them and how they can claim.

The Fund will initially be open in areas with the highest levels of flooding, where the Flood Recovery Framework has already been activated. These are Gloucestershire, Leicestershire, Lincolnshire, Nottinghamshire, Somerset, Warwickshire, West Northamptonshire, Wiltshire and Worcestershire.

The next counties under review will be Berkshire, Herefordshire,

Oxfordshire, Surrey, Staffordshire, Yorkshire, Norfolk and Derbyshire.

Farming Minister Mark Spencer said: “I know how difficult this winter has been for farmers, with extreme weather such as Storm Henk having a devastating impact on both cropping and grazing, as well as damaging property and equipment.

“The Farming Recovery Fund will support farmers who suffered uninsurable damage with grants of up to £25,000, and sits alongside broader support in our farming schemes to improve flood resilience.”

GEA acquires Cattle Eye

GEA has acquired Northern Ireland-based software company CattleEye. This adds the pioneering artificial intelligence system which detects and predicts lameness and assesses body condition score to its existing portfolio of solutions for dairy farms.

The system combines a 2D camera with specialised software that analyses cow movement and body score patterns. It is said to provide unparalleled insight into herd health and can be integrated into new or existing dairy units, regardless of the type of milking system.

HUK Awards

Holstein UK has published the results of the 2023 All Britain Awards following the two-stage judging process, which saw a total of 168 cattle entered across the 15 classes.

Shortlisted animals from each class were judged by this year's panel of David Hodgson (Wormanby), Iwan Morgan (Erie) and Michael Yates (Logan).



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What will newly approved Fair Dealing regulations mean for UK dairy farmers?

By Paul Tompkins,
NFU Dairy Board Chair

After over a decade of campaigning by UK Farming Unions, new legislation has been laid in Parliament, and approved by resolution in both Houses, aimed at ensuring fair and transparent contracts for all dairy farmers in the UK.

Unfair and unbalanced milk contracts have long been a concern for the dairy sector, with reviews in 2018 and 2020 by the Groceries Code Adjudicator and Defra finding an imbalance of power across the supply chain.

This was believed in part to be caused by milk buyers having the power to set and modify the terms of a contract with often little notification.

This has led to uncertainty and ambiguity over the years and enabled unfair practices to persist, undermining those good relationships which do exist between milk buyers and producers and damaging trust across the supply chain.

The introduction of the 'Fair Dealing Obligations (Milk) regulations 2024' represents a significant step forward towards fairer, more transparent supply chains where risk is shared. It will introduce mandatory minimum terms to which all dairy contracts must adhere.

The main areas covered by the legislation include:



Unfair and unbalanced milk contracts have long been a concern of the sector

Price: Prices will continue to be market-led, but the legislation will introduce greater transparency. For example, if the contract contains a variable price it can only be moved in reference to the agreed factors set out in the contract.

Any change to those factors would have to be negotiated and farmers will have the power to challenge a price if they feel their milk buyer has not followed due process.

Variation: All variations to the contract must be agreed by both parties. This means milk buyers

cannot enforce changes without agreement from the farmer or their representative organisation.

Farmer representation: Greater contract flexibility will be allowed where farmer-owner structures, like co-operatives and producer organisations, negotiate the terms of a contract on behalf of producers. The flexibility allowed under the regulations may also make these structures more attractive for processors to engage with.

Exclusivity: Non-exclusive contracts must be offered where

the milk contract demands a fixed volume of milk.

Notice periods: The legislation requires milk buyers to provide a minimum of 12 months' notice if they wish to terminate a contract.

There are several other areas covered in the regulations too, such as dispute resolution, force majeure, and the introduction of cooling-off periods. The legislation also includes extensive powers for the Secretary of State, or most likely an Agricultural Supply Chain Adjudicator acting on their behalf, to oversee and enforce the code and impose financial penalties on those in breach.

The date the regulations will come into force has not been set, but it is expected to be before the summer. We also know that there will be an implementation period to allow for a managed transition and provide time for all contracts to be updated and made compliant.

For new contracts there will be a three-month implementation period, meaning three months after the regulations come into force all new contracts will have to be compliant. A further 12 months on from that date (so 15 months after the regulations come into force) all existing contracts must be compliant.

Defra will be releasing more detailed guidance on the regulations when they become law. In the meantime, see NFUOnline for further information.

Reviving interest in organic Red Tractor scraps module

Efforts to arrest the decline in organic food sales were highlighted at the first annual conference of the newly formed UK Organic, formerly the Organic Trade Board.

Established as a Community Interest Company, UKO says its ambition is to unite representatives across the supply chain to re-energise the organic industry and create renewed consumer interest.

Adrian Carne, Chair of UKO, said: "Organic farming represents the gold standard for sustainable agriculture. It is legally binding and globally recognised.

"Inadequate funding and a fragmented landscape have meant that the sector has not been able to capitalise on the key benefits



of organic food in the shopper's mind, and numerous sustainable farming initiatives are competing in a crowded space and risk confusing consumers further."

Operational costs will not rely on membership fees. Instead, UKO will seek funding from external stakeholders. It is inviting certified producers, processors, brands, distributors, retailers, and all interested parties to join as Fellow Supporters.

Farmers' concerns over a possible and much-publicised Red Tractor Greener Farms Commitment module have finally been laid to rest, as the Assurance body has scrapped the idea following feedback from its members.

The module was developed with the aim of helping the whole supply chain to meet the growing need for demonstrable sustainability in a practical and consistent way.

However, Red Tractor Chair Christine Tacon has now said that while the module had been conceived with the best of intentions, errors had been made. She has apologised and pledged to improve communications to farmers and listen more closely to them.

"We take responsibility for those issues and are sorry," she said. "We hope that by dropping the module, we can close the door on this chapter and move forward.

"We will only be involved in future environmental standards when all constituencies across the UK food and farming chain, by sector, ask us to and with full consultation."



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On-farm event gets Buy British message across

The public sector is a hugely overlooked market for British farmers – that was the general consensus at a recent on-farm event in Hertfordshire.

Hailed as an industry first, Love British Food's 'Public Sector Influencers' Day brought public sector decision-makers together with British food producers and suppliers on Stuart Roberts' Hammonds End Farm.

Attendees toured the farm, seeing its sustainable management and positive impacts on the environment and biodiversity. It emphasised the value of making British food first supplier of choice.

"There is a huge appetite across the entire public sector to buy British,"



There is appetite to buy British produce



The event brought together public sector decision-makers and producers

said Love British Food Founder Alexia Robinson. "It's all about inspiring and enabling both public sector caterers as well as farmers and suppliers to make British food first supplier of choice. Buyers must be encouraged to consider where their food comes from. And how it is produced contributes to delivering on the many targets being set."

More needs to be done to encourage farmers to view the public sector as a customer, she added. "We do not produce enough food in this country to meet the full public sector requirement, so there is a clear business opportunity."

Momentum is building, added Phil Shelley, Chair of the NHS Food Review and National Lead for

Net Zero Food at NHS England. "We, in the public sector, want to buy more British food," he said. "I hope this event gave farmers the confidence to invest in supplying the public sector, and helped attending buyers understand the true value of buying British."

The agreed objectives from the event were to:

- Inspire public sector providers to work with farmers and food producers to achieve robust supply chains
- Enhance understanding of exactly how farmers can supply the public sector
- Promote the public sector as a customer to encourage more farmers to invest in supplying it
- Explain to public sector caterers why buying from British farmers will help them meet their sustainability and net zero targets.

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WHEN FARMING MEANS BUSINESS

Sustainable dairy award winner

West Sussex dairy farm manager, Matt Penny, has won this year's VetPartners Sustainable Dairy Farmer of the Year award.

The awards recognise farmers committed to improving business efficiency, environmental sustainability and livestock productivity, or fostering community relationships. The nomination came from vet Matt Dobbs of Westpoint Farm Vets in Horsham, who said it

was prompted by the farm team's "amazing attention to detail".

Mr Penny manages Oliver Grant's Carters Lodge Dairy, near Handcross, with 330 cows. The six-week block-calving system has conception rates of 65%. With vet support, the farm team is running several initiatives to reduce input costs and environmental impact while improving herd welfare.

"They've extended grazing and optimised pasture to increase carbon capture," said Mr Dobbs. "In addition to having low-stress, happy cows, they've reduced antibiotic use and worming treatments. They have shown that teamwork, planning, organisation and sticking to best practice yields results."

The two runners up for the award were Ryan Dobson from Colley Farm, Somerset, and Lucy Noad and family, of Woodhouse Farm, Wiltshire.



Matt was praised for attention to detail

RASE awards deadline closing soon

There are just a few days left for farmers, landowners, advisers, researchers and industry professionals to submit nominations for the 2024 Royal Agricultural Society of England awards.

Six awards are up for grabs, including the National Agricultural Award, the Excellence in Practical Farming Award, and the Bledisloe Gold Medal for Landowners. All the awards welcome both self-nominations and recommendations. The deadline for entries is April 17.

Access to public sector procurement for smaller producers to launch soon

Any farmer, organic or not, can get involved in a Soil Association Exchange initiative which will launch later this year, giving public sector food buyers farm-level sustainability data.

This should also allow small producers to contribute to larger public sector orders from the likes of schools and hospitals, by enabling more informed sourcing decisions.

The initiative will deliver the environmental measures for farms as part of the Crown Commercial Service's Buying Better Food and Drink agreement, which public sector organisations can use for buying produce through a single online access point.

The Soil Association Exchange measures the environmental impact of farm operations by assessing six key areas – soil, water, carbon, animal welfare, social impacts, and biodiversity. It does this by collecting data through physical farm surveys, satellite imagery and other datasets



The initiative delivers environmental measures via an online access point

on metrics like soil carbon and bird counts, alongside considering the food and community benefits a farm provides.

Its Chief Executive Joseph Gridley said: "It is hugely important for our public institutions to serve food that supports sustainable, British farm businesses and we are excited to start delivering data that will help to make this easier. Exchange is already

working with hundreds of farms who have helped to develop our wide-ranging sustainability metrics. These measurements consider the full picture and can help to show schools and hospitals all of the brilliant things that farmers are doing to support nature while producing good quality food. We hope we will soon see a much wider variety of producers accessing this important market."

Small drop in dairy feed production

Global animal feed production remained steady in 2023 at 1.29bn tonnes, which was only a slight decrease of 2.6m tonnes from 2022 estimates, according to Alltech's 2024 Agri-Food Outlook.

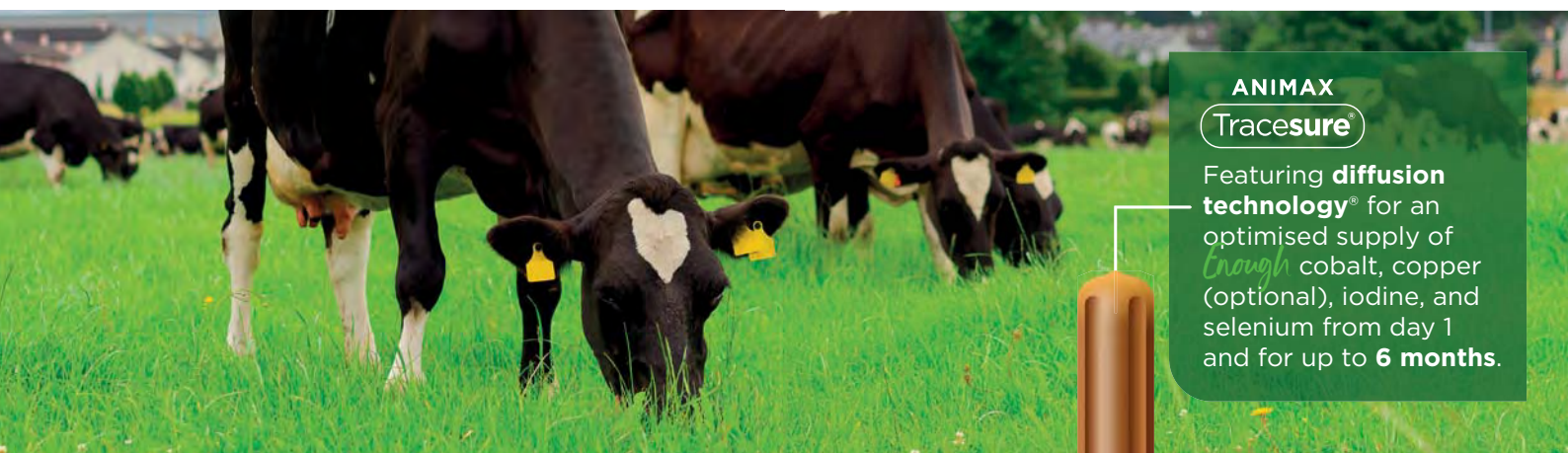
The annual survey, which includes data from 142 countries and more than 27,000 feed mills, shows dairy feed tonnage decreased by 2.3% (126.23m tonnes), attributed primarily due to the high cost of feed combined with low milk prices.

This led some farmers to reduce cow numbers or rely more on non-commercial feed sources.

Asia-Pacific was the only region that increased its dairy feed tonnage in 2023, fuelled by a continued increase in dairy consumption there, as well as an expansion of feed production in co-operatives.



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VMA Talent Award winner

Industry joins forces to tackle cow lameness



Winner Abby Duggan (2nd left), with Alan Whibley (far right) and runners-up

The British Veterinary Association's Digital Content Manager, Abby Duggan, has won this year's Veterinary Marketing Association New Marketing Talent Award.

Sponsored by British Dairying, the award recognises a new marketer who has demonstrated marketing flair within the veterinary and animal health industry.

British Dairying's Publisher Alan Whibley said: "It is so important that we celebrate and encourage new talent, and it is great to be able to give them this opportunity. We have a fabulous winner again this year."

The winner gets a £2,000 training bursary and £1,000 personal cheque, while the runners-up (Hollie Jenkins and Callum Watkins) got £250.

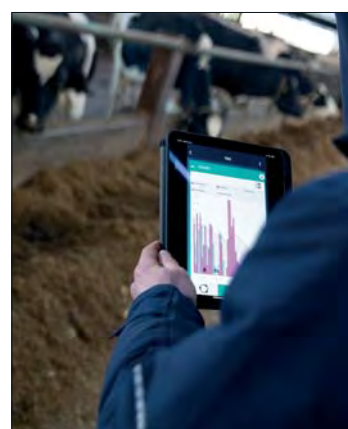
Veterinary advice can boost grant success

Farmers in England can boost their chances of receiving 50% grant funding for animal health and welfare equipment, by discussing the application with their vet.

The government-funded Farming Equipment and Technology Fund grant goes towards the cost of more than 130 listed items that help to improve animal health and welfare.

The funding is competitive, however, farmers can improve their application score by providing evidence they have discussed it with a vet. Scores will be boosted by 20% if the farm vet has advised use of the grant-aided items. "You can get vet advice by telephone, email, or as part of a vet visit," said an RPA spokesperson.

"You may also be eligible to apply for a fully-funded vet visit as part of the Sustainable Farming Incentive annual health and welfare review. But you must receive advice on your application after January 1 2024 and before January 1 2025 for it to



Grants offer up to £25,000

be eligible for the increase. You will need to provide your vet's details, the date of the discussion and permission for us to contact your vet when you apply." Successful applicants will receive a grant of between £1,000 and £25,000, covering 50-60% towards either the cost of the item. The deadline for applications for animal health and welfare items is May 1.

Major players from across the dairy supply chain are supporting Stride, the UK dairy mobility initiative which was launched in February.

The not-for-profit initiative aims to use a survey to identify producers' views on lameness, its impact on herd health and welfare, and their businesses' bottom line. The outcomes will be used to help producers take steps to reduce lameness and mitigate its costs and consequences.

"We are delighted with the level of support we have received," said Matt Dobbs at Agsenze. "Leading dairy processors and retailers have recognised the importance of

mobility to the industry in its widest sense and Sainsburys, Muller and First Milk have signed up to support our activities.

"We have also received wider industry support from Ruminant Health and Welfare and the Dairy Cattle Mobility Steering Group. At farm level we are pleased that Kingshay, the National Association of Cattle Foot Trimmers and LKL Services have identified the practical value that Stride is committed to creating."

The survey will run until the end of April, with results due to be reported in early summer, ahead of a series of on-farm events.

Vet attestation number (VAN) derogation ends

Scottish auction mart customers are being reminded by the Institute of Auctioneers and Appraisers in Scotland that the temporary derogation on Vet Attestation Number (VAN) requirement for non-assured primestock ends on April 12. From that date, non-assured producers must demonstrate that they have a VAN if their animals are to be eligible for export.

28th British cheese awards

Supreme Champion at the 28th British Cheese Awards was a small, mould-ripened fresh cheese made by Cote Hill in Lincolnshire.

Held at the Bath and West Showground as part of its new Food and Drink Festival, the awards attracted more than 600 entries from the UK and Ireland.

The winning cheese, launched just over a year ago and called Snowdrop, is made by Mary and Michael Davenport at Cote Hill Dairy. It was named in honour of Cynthia Davenport, who started the dairy at Cote Hill and loved its snowdrops.

It is a soft, smooth variety made from raw cow's milk, and said to be similar in style to a French St Felicien. The reserve champion cup went to



Lincolnshire cheese tops the board

Cashel Blue from Cashel Farmhouse Cheesemakers, which also won best Irish cheese. Best English cheese went to Tor from White Lake Cheese and the best Scottish went to Minger from Highland Fine Cheese. The Welsh winner was Gafr Las from Bryngaer Goats.

Bovine lungworm survey

The Control of Worms Sustainably (COWS) group has launched a survey of lungworm in cattle and its treatment. It's looking to monitor outbreaks, what class of stock is most affected, what clinical signs are seen and how well animals respond to treatment. Vets can complete the survey questionnaire on the COWS website.



The survey will monitor lungworm



We'll take care of business

(From left to right)

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Hedgerow regulations to become law

By Howard Walsh

Regulations to continue protecting English hedgerows will be coming into law after the Government's consultation last year.

They will be introduced as soon as Parliamentary time allows and will be regulated by the RPA. Defra said the consultation showed overwhelming support for hedgerow protection, with more than 95% of respondents supporting plans to maintain cutting bans and buffer strips. It said the RPA will work with farmers to ensure they are supported to comply, 'taking a fair and proportionate approach to enforcement'.

Providing continuity for farmers and land managers, the regulations will include a two-metre 'buffer strip' from the centre of hedgerows, with no cultivation or application of pesticides or fertilisers, and a hedge cutting ban between March 1 and August 31 to protect nesting birds. They also include a



Parliament is introducing a more proportionate enforcement approach

streamlined notification process for farmers needing an exemption to cut or trim hedges in August if they are sowing oilseed rape or temporary grass.

"A fairer, more proportionate enforcement approach focused on outcomes will see farmers provided with advice to help them comply with requirements – very different from

the approach seen previously," said a Defra spokesperson.

The regulations are intended to support the efforts of many farmers already carrying out vital work. This includes over 90,000km of hedgerows being managed through 16,000 agreements in Countryside Stewardship and Sustainable Farming Incentive schemes, and more than 13,000km of hedgerows created or restored using Countryside Stewardship grants.

Farming Minister Mark Spencer said: "Farmers have been protecting, planting and maintaining our hedgerows for centuries and I want to thank them for their continued efforts."

Environment Minister Rebecca Pow added: "Our consultation showed just how valued our hedgerows are by farmers, the public and environmental groups alike, and these regulations will mean we can all reap the benefits for generations to come."

Vegans in support of farmers



The group is trying to build trust between the vegan and farming communities

A well-publicised farmer demonstration in London at the end of March was also supported by a vegan organisation.

Save British Farming, together with Fairness for Farmers of Kent, organised the go-slow tractor protest in Westminster to pressure Government to block substandard imports, put an end to what they claim is dishonest food labelling, and take more action to address food security.

The rally was joined by Vegans Support the Farmers, an Animal Rising project which says it has three goals: A fair price for farmers, to see more food grown in the UK with fewer imports, and to listen to farmers instead of corporations. It says it also aims to fundraise £100,000

to support the mental health of young farmers.

It was not the first time the organisation has supported farmer-initiated protests. The organisation hopes to break down barriers, to build a basis of trust between the vegan and farming communities. It is also working towards a plant-based food system, and at the Westminster rally its supporters were dressed as fruits and vegetables.

Spokesperson Kerri Waters said: "We're here in solidarity with the hard-working farmers who are finding it more and more difficult to do their job. The government is turning its back on the issue of food security and is instead prioritising cheap imports. We all want to see a healthy agricultural sector."

Free future-proofing event

Farmers can now register to attend a free demonstration event at Plumpton College in East Sussex, to see and discuss how to future-proof their livestock businesses.

Farm of the Future: Putting regenerative livestock production into practice' will be delivered by Innovation for Agriculture in partnership with the RASE on May 30.

The day will include panel discussions and debate on regenerative agriculture, a farm walk, machinery demonstrations to include the New Holland methane tractor, and a soil safari showing how to carry out your own visual soil assessments.



Holly Shearman, Farm of the Future

New partnership improving support for rural cancer

The Farming Community Network has launched a new UK-wide partnership with Macmillan Cancer Support to improve the help available to those living with cancer in rural areas.

The campaign will include raising awareness in rural communities of the signs of cancer and building referral bridges to and from Macmillan's services.

Dr Jude McCann, Chief Executive Officer at FCN, said: "Farmers are an intrinsic part of rural communities, but long working hours and a lack of access to support services can limit opportunities for health checks, and sadly the early signs of cancer may be difficult to identify or missed entirely."

"This partnership has the potential for reaching people with cancer who could otherwise be without support."

• FCN can be contacted in confidence on **03000 111 999**, 365 days a year. The Macmillan support line is on **0808 808 00 00**, seven days a week.

All eyes on the weather



Jamie Day

Feed market specialist

Cereal prices reversed their three-month decline from mid-March, but have since lost some of the gain, while protein feed material values have softened over the period.

As we enter the last quarter of the cereal marketing year, prices might be expected to increase as old crop supplies tighten ahead of harvest. In fact, UK wheat futures had lost £30/t between the end of December and the beginning of March, although the latest month has seen some increase. The May 2024 LIFFE contract opened the month at £161.10/t and closed it at £171.95/t.

Fears of a small UK wheat harvest after the exceptionally wet autumn and spring are reflected in a wider differential between old and new crop futures values - the November '24 and May '25 positions gained £15.30/t and £14.05/t respectively, to close March at £194.90/t and £202.40/t.

Reduced US wheat area

Wheat values have had recent support from US Department of Agriculture (USDA) figures showing an estimated 4% fall in winter wheat plantings in the US, although partially offset by an increased spring wheat area. With the EU wheat area also falling 4% year-on-year, all eyes turn to the weather across the Northern Hemisphere as the crucial crop development period gets under way.

Cheap Russian wheat continues to dominate the global export market, with European and UK exports depressed, which is limiting any increase in values. Russia exported a record high of 4.9m tonnes of wheat in March.

The AHDB has increased its estimate of the UK wheat carryover to 2.8m tonnes, which will help to offset the expected new crop shortfall, with wheat imports already running at 2m tonnes. The AHDB's crop condition report to the end of March shows the impact of the second wettest August-to-February period since records began in 1837. The report rates 33% of GB winter wheat as good or excellent (compared to 90% a year ago) and just 38% of winter barley and 37% of winter oats.

While some spring crops are being drilled and winter crop inputs are being applied on lighter land, much remains too wet to travel on. Later drillings will have a reduced yield potential and the AHDB had already estimated a 79% increase in arable farrow by mid-March. Defra has acted to limit the area that can be put into Sustainable Farming Incentive environmental options, rather than food crop plantings, in response to concerns over the impact on future food security.

Spot UK wheat prices opened March in the £150-£160/t ex-farm range, save for the North East where biofuel demand added £10/t. By the end of the month, they were averaging £160-£170/t ex-farm, and £185/t in the North East. Barley values had fallen as low as £130/t ex-farm by

mid-March, but then recovered a bit to encourage growers to the market, finishing the month at £135-£150/t ex-farm, and £165/t in the North East. But UK barley exports remain low, outcompeted by aggressively-priced Black Sea origins. The reduced new crop potential is also a bullish factor.

Maize values have tightened on the USDA's estimates that its maize area for the coming season will be 36.4m ha, down from last year's 38.3m ha. But this would indicate higher soyabean plantings. Ex-store UK maize tightened from £185-£191/t over the latest month.

Plenty of soya

The USDA planting estimates predict a 3% increase in the US soyabean crop area, to 35m ha. At the same time, the US soyabean export pace is down 15% year-on-year, which is pointing towards a bigger end-season carryover. With Brazil's harvest nearing completion, Argentina's getting under way, and the US soya planting season nearing with generally good soil moisture, market factors are bearish.

UK soyameal supplies have recovered from the early-season restrictions, and greater availability is weighing on domestic values. Any-origin hi-pro soyameal fell from £389/t ex-store to £364/t in March. Rapemeal values tightened over the same period. Smaller UK and EU rapeseed crops for harvest 2024 mean imports will rise over the 2024/25 marketing year. May quotations have reached a three-month high of £278/t ex-store.

Fibre feedstuffs have fallen in value - soya hulls from £178/t to £164/t over March, in line with the soyabean market. Palm kernel lost £20/t to close at £180/t ex-store, although Indonesia's palm exports are reported to have dropped 25%, which could indicate tighter supplies.

Feed production outlook

The annual Alltech AgriFood Outlook survey of global feed production estimates that world dairy compound feed production fell by 2.28% during 2023. Many dairy farmers were affected by high feed costs and falling milk prices, and responded by reducing cow numbers and buying less feed. The Asia-Pacific region was the only one to see growth, with a 4.52% increase in feed output, largely driven by India (up 8.7%) and China (5.8% higher) - with rising consumer interest in milk and dairy products in these countries.

By contrast, Europe's dairy feed production fell by 6.6% in 2023. The survey points to the effect of lower milk prices and cattle diseases on the sector. Most cattle farmers across central and south-eastern Europe had a good grass year, which meant they bought less supplementary feed. But water scarcity was an issue in the South West - especially Spain and Portugal - where some dairy herds were forced to cease production.

Alltech warns that sustainability market drivers are continuing to shape the European dairy industry, with national environmental policies leading to reduced cow numbers and a consequent decline in dairy compound feed demand.



Protect silage from effects of wet winter

Peter Smith, Volac business manager for Ecosyl

After such a wet winter, where little field work was possible, the risk of silage becoming contaminated from soil and slurry when it's made will be greatly increased.

Uneven, rutted field surfaces, left by machines travelling on wet land, increase the risk of soil and soil bacteria, such as clostridia, contaminating silage.

Clostridia feed on grass sugars and proteins. They can also feed on the good silage acid, lactic acid, wasting as much as 50% of the dry matter (DM) and a fifth of the energy that they consume. They also produce compounds that make silage less palatable, compromising intakes.

Meanwhile, late slurry applications mean less time for slurry bacteria to decline before first cut. Slurry bacteria such as enterobacteria waste about 40% of the DM and 16% of the energy in the grass sugar they ferment.

Ten weeks

Ideally, about 10 weeks should elapse between applying slurry and making grass silage, but this is rarely possible. For those cutting on 15 May, slurry should have been applied by 6 March. But few farmers achieved this.

If grass crops were fairly light when slurry was applied, this might help to reduce contamination because the grass might have been able to grow through the slurry layer. But with heavy grass crops, there's less chance of this.

To reduce soil bacteria risks, roll uneven and rutted fields, if this is an option. However, be aware that if there's a lot of grass cover, rolling will check the grass. When making silage, ensure machines such as tedders and rakes are set up correctly so they don't catch uneven ground and flick soil or late-spread slurry crusts into the swath.

Wherever slurry or soil contamination is a risk, wilting rapidly to 30% DM helps by allowing bad bugs less time to act on the crop, although this isn't always possible.

Proven additive

Treating with a proven additive is also important. Applying large numbers of highly efficient, beneficial bacteria to rapidly dominate the fermentation will help to swiftly overcome the undesirable bacteria, leaving a more palatable silage of a higher energy to feed.

Research on Ecosyl, for example, has shown it to produce a very fast pH fall soon after ensiling. And DNA fingerprinting - a technique used in forensics - has provided visible evidence of its effect: untreated silage quickly became dominated by enterobacteria, but there was very little growth of enterobacteria in the treated silage as the beneficial bacteria in Ecosyl dominated the fermentation for a favourable result.

Peter Smith can be contacted at Volac on 07920 721955 peter.smith@volac.com

2024 RABDF Dairy Woman Award opens

The Dairy Industry Woman of the Year Award has now opened for nominations. The award, run as part of the Women in Dairy initiative by the RABDF recognises individuals who have demonstrated the Women in Dairy values; connect, share and inspire, in all aspects of what they do.

Women in Dairy is calling on individuals to come forward and nominate anybody they feel goes above and beyond for the industry. It is also possible to self-nominate. The closing date is July 12.

After this a judging panel will select a shortlist to interview, with the winner being announced at the Women in Dairy Conference in late September.

Last year's winner busting the barriers

Last year's winner, Hannah Rose, is a fourth-generation farmer, who is making her own path by living and working as an Assistant Herdsperson at the Usk Prison Dairy Farm, passing on her knowledge and rehabilitating inmates.

With the odds seemingly against women from the off when it comes to dairy farming, Hannah is busting these barriers daily, using her skills and knowledge to, quite literally, transform lives. It is her ability to use her knowledge to create life-changing perspectives and decisions, alongside the way she documents all aspects of her farming



The award recognises the many women going above and beyond to the benefit of others in the sector

life to help educate others, that saw her crowned the award winner.

Dairy Farmer, RABDF Trustee and Head Judge Karen Halton says Hannah stood out as the winner, even though there was tough competition from her fellow finalists. "The unicity of Hannah's situation and how she was using the industry to help others was particularly special. The work she is doing as part of her role on the prison farm and the

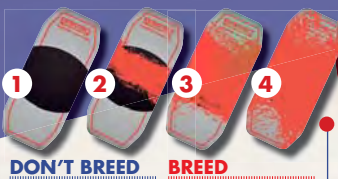
additional effort she puts into profiling the industry to the wider public is truly inspiring," she says.

"We mustn't forget how many women are going above and beyond for the benefit of others in the sector, and this award is what that is all about.

"So if you know anyone or you think the work you do is inspiring then please get your nomination in."

For information visit www.womenindairy.co.uk.

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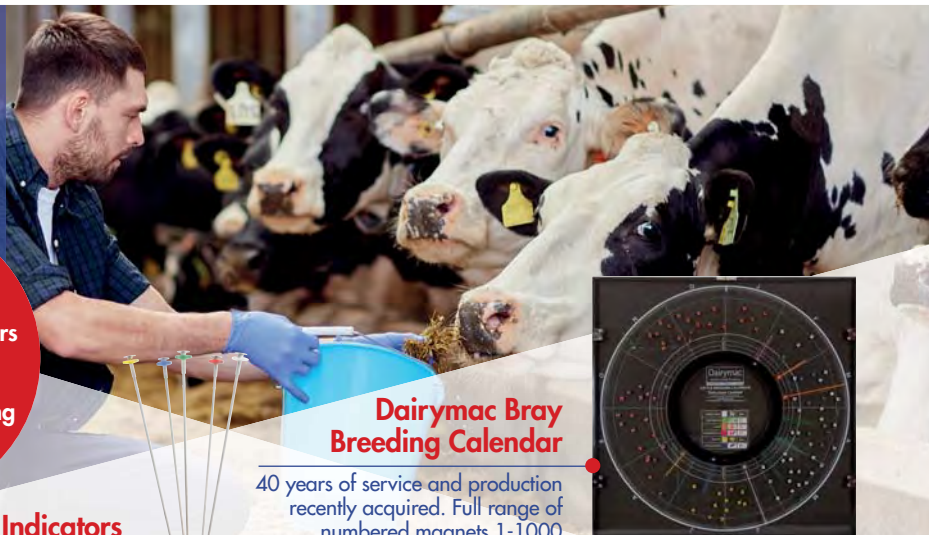
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Mozzarella: One to watch



Chris Walkland

COMMENT

Well there's no doubt what the big news this month is, and it eclipses the mega climbdowndown from Red Tractor on the Greener Farms Commitment, which I will turn to later. And that news comes from Arla, which has announced it is building a new mozzarella plant for £179m. This is perhaps the biggest financial investment in the UK by any company, although if we factor in inflation then Arla's Aylesbury plant, which was opened 10 years ago at the end of May, will have cost proportionally more.

Make no mistake, this is going to have a significant impact on the UK industry, with the ripples spreading far and wide, for a number of reasons.

New plant seeds opportunities

First the obvious: There's the impact on the milk supply situation in the South West, although Arla says it will not be recruiting for additional milk. It does ship up a lot of milk from Cornwall, for example, and has a wide catchment area in the South West. For commercial reasons the firm isn't saying what capacity its new plant will be, suffice to say it will be very sizeable indeed.

Glanbia spent €130m (£112m) back in 2018 to build a 45,000t plant, for example. Nevertheless, to run a mozzarella (or any factory) profitably, requires it to be full at all times, so Arla may have a demand for spot milk purchases – or even curd made by other cheese makers in the region. In Ireland, Leprino's mozzarella plant at Portlaoise has no liquid milk supply, it simply takes in curd. Thus, the new mozzarella plant may well help to tighten up the cheddar market, too. Certainly it is a positive card to play by Arla and other cheese makers in their negotiations with retailers.

Secondly, some (but not all) of the mozzarella made will be exported, so that means more UK milk is exported. And that's another positive as the less dairy volume on the market here, the better.

“The best news we've had on farm assurance in years.”

Thirdly, there's the impact on current mozzarella makers in the UK – Leprino and Dairy Partners. It is inevitable that Arla will be after some of their markets and customers. Thus the ripples spread into the milk fields of south and even north Wales, and it is inevitable that Arla will be playing its green sustainability card to win business. I'm aware that Leprino is doing some sustainability work with its farmers, and I'm sure Dairy Partners is on

the journey too, but neither are going where Arla have gone. But they might have to go further and faster once Arla's new plant starts to roll. Quite whether Arla targets Dairy Partners' relatively smaller customer base compared with Leprino's larger ones will be one to watch.

Fourthly, the investment is a huge vote of confidence in the UK dairy industry. And that has to be welcomed – especially in light of what is happening to the dairy industries in other countries. An industry that doesn't have investment goes backwards, and this investment should give farmers much confidence that they, and their milk, will be much in demand.

However, it has to be said that although mozzarella is increasingly being viewed as 'the world's cheese' (on the grounds that it's a lot easier to sell in Asia than cheddar), it doesn't mean it's a licence to print money. Leprino does make good money (usually), and is possibly one of the best-performing dairy companies in the UK on a return-on-capital basis, but it does this by being exceptionally efficient and because it pays what it calls a “competitive milk price”. That's code for only paying a price that it needs to pay. Leprino (or mozzarella for that matter) is never one to set the pace in the milk price stakes. In contrast, Arla's remit – and the expectations surrounding the business – is to return the highest price.

Best in world technology

What will make or break the investment is the technology installed in the plant. I've been around the Leprino plant on Anglesey, and it is seriously impressive. I'm told by the firm its technology is the best in the world, and patented. Arla's UK team don't know what technology they will be installing just yet, or aren't saying, but for sure it will be much more efficient than its plants in Europe. Arla says the investment will take its capability in mozzarella “to the next level”, and I have few doubts that it will.

Now to Red Tractor (again). In my last article I said I expected the organisation to press on with its Greener Farms Commitment module. And then a few days after I had penned my article the AHDB and NFU came out with their joint statement saying that Red Tractor should scrap it. This was dynamite stuff, as it meant none of the unions, AHDB or Tenant Farmers' Association (which was the first off the blocks on this, back in January) supported it. It is a humiliating climbdowndown – especially after the chair of Red Tractor, Christine Tacon, had stated on Radio 4 that “it was a matter of when, not if, the GFC would be introduced”. Quite how these people manage to stay in their posts is a mystery of our time.

Still, sense has prevailed; the GFC has gone, and Red Tractor can return to its day job of ensuring “the food we buy has been responsibly sourced, safely produced and comes from crops and animals that have been well cared for” (a direct quote from Red Tractor's website). Indeed, its three tenets on the website are “traceable”, “safe”, and “farmed with care”.

Which brings me on to the issue of cattle tags. Back in early March, three Pembrokeshire farmers

were prosecuted for fraudulently swapping the eartags of healthy cattle for those infected with TB. They were fined £380,000. I am led to believe that when the farmers were found guilty they had their Red Tractor status removed... only for it to be returned the very next day, for some wholly inexplicable reason. I wouldn't have thought that the practice they were charged with falls under the banner of “responsibly sourced”. Needless to say, the farm's milk purchaser severed all ties with the farm.

Meanwhile, elsewhere, I hear of another farmer who is being warned about his Red Tractor status because of an administration issue relating to bovine viral diarrhoea tags. This is an administrative scenario which has nothing whatsoever to do with the above three tenets. And yet there is malice in the warnings from the farm assurance assessor, which is adding undue stress on the farmers concerned.

“Mozzarella – doesn't mean it's a licence to print money.”

There are but three words that can be used for this (and other scenarios that you will know of far better than me) – just as for the Greener Farms Commitment: ENOUGH IS ENOUGH! Unless the activity or practice of a farmer or farm can be seen to affect food sourcing or safety, or animal welfare and good practice directly, then that should be the extent of Red Tractor's remit as far as farmers are concerned. Petty or mean mindedness, or overzealousness from the assessors on small or irrelevant side issues all have to go if Red Tractor has a hope of regaining a semblance of respect from grass roots farmers.

Which neatly brings me to the next independent review of Red Tractor, commissioned by AHDB and all of the Unions. It has just appointed three out of four commissioners who “will be responsible for setting the terms of reference and a timeline to ensure the process provides clear outcomes to the industry”. The lead commissioner is Dr David Llewellyn, the former Vice Chancellor of Harper Adams University, with the two others being James Withers, former Chief Executive Officer at Scotland Food and Drink, and Mark Suthern, Chairman of Trustees at the Farming Community Network.

These, I think, are extremely good and positive appointments. All three are experienced and respected, and I have confidence they will deliver what is required in their assessment of farm assurance. Their review “aims to seek feedback from all farmers, crofters and growers about all farm assurance schemes with a view to revolutionising farm-to-fork assurance, making it truly fit for the future”. Make the most of it: It is perhaps the best news we have had on farm assurance in years.

AHDB MILK PRICE LEAGUE TABLE

Milk price league - February 2024

	February price	Annual average
Müller M&I M&S*	44.98	44.92
Müller M&I Tesco*	42.86	42.86
Müller M&I Sainsbury*	41.05	40.99
Müller M&I Co-op*	40.28	40.22
Pattemores	37.83	37.83
Barber's Cheesemakers	37.71	37.71
Wyke Farms	37.78	37.71
Crediton Dairy	37.50	37.56
Dale Farm NI	37.43	37.44
Arla Manufacturing	37.46	37.27
Lactalis - Profile	37.24	37.17
Dale Farm GB	37.01	37.02
Wensleydale	36.86	36.86
Lactalis	36.49	36.49
Saputo Dairy UK - Profile	36.18	36.30
Saputo Dairy UK - Variable	38.18	36.25
First Milk Manufacture	36.12	36.18
Belton Farm	36.00	36.00
Müller M&I Direct	36.04	35.98
Leprino Foods	35.52	35.84
Arla Direct Manuf.	35.82	35.62
Lactalis - Seasonal	38.19	35.36
South Caernarfon	34.66	34.75
Freshways	34.66	34.50

NOTES TO LEAGUE TABLE

Milk prices shown are the monthly price and the annual average price that would be paid on a contract for 12 months going forward if the present price schedule remained unchanged, according to AHDB calculations.

Prices listed in the Milk Price League Table are ranked according to estimated annual average price. Prices exclude capital retentions, administration charges, farmer group subscriptions, and VAT but include the AHDB Dairy levy and seasonality adjustments.

The prices in the league table are for a standard litre of milk, with 4.10% butterfat and 3.35% protein, for the annual delivery of 1.5m litres, with SCCs of 164,000 and Bactoscans of 26,000.

While the AHDB seeks to ensure that this information is accurate, no warranty is given and the AHDB accepts no liability caused in relation to information and opinions contained in or omitted from this document.

BONUSES NOT INCLUDED

1. Arla Manufacturing currently has a guaranteed minimum of 1.33ppl. This is not included in the milk price opposite.
2. First Milk manuf. member premium +0.50ppl and F/M manuf. Tesco cheese group +1.58p. Members may qualify for both premia.
3. Müller M&I Direct, direct premium 1.00p; this is not included in the league table price but Müller says almost all suppliers are eligible for it.
4. South Caernarfon will pay a 13th payment of 0.40ppl.
5. Pattemores pays an extra 0.25ppl for thermoduric count below 250/ml.
6. Dale Farm NI will pay a +2.00ppl winter supplement.

None of these supplements are included in the milk prices league table; they are additional to them. Retailer price supplements are included where applicable.

* These prices reflect the milk supplied to the retailer.



Farmgate milk price changes	2023						2024			
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
Arla Sainsbury's	-0.81	-0.57	-0.21	0.34	-0.26	-0.14	0.08	-	-	-
Arla Tesco	-	-1.68	-	-	-0.10	-	-	0.69	-	-
Arla Direct Manuf.	-1.71	-	-	-	-	-	0.76	2.52	-	0.84
Arla Manuf.	-0.09	-	-	0.09	-	0.89	3.08	-	0.88	-0.04
Barber's Cheesemakers (1)	-2.00	0.75	-	-1.60	-	-	1.00	1.00	-	0.50
Belton Farm	-	-	-1.00	-0.75	-	-	1.00	-	-	1.00
Crediton Dairy	-2.00	-	-	-	-	-	-	-	-	0.75
Dale Farm GB	-0.95	-0.50	-	-0.25	-0.71	-	0.44	0.55	0.62	-
Dale Farm NI	-1.50	-0.50	-	-	2.00	0.50	1.50	1.00	-	-
First Milk Manuf (2)	-1.04	-	-	-	-0.85	-	-	1.00	1.00	0.75
Lactalis/Caledonian	-0.31	-	-	-	-1.55	-	1.03	0.78	0.52	0.78
Leprino Foods	-	-	-	-	-	-	1.00	1.00	1.00	1.00
Müller Co-op	-0.93	-1.09	-0.07	0.12	-0.29	-0.05	0.03	0.24	-	-
Müller M&S	-2.17	-1.34	-1.41	-	-1.20	-	-	-	-	-0.70
Müller Direct	-2.00	-1.00	-	-	-0.50	-	-	-	-	1.00
Müller Sainsbury's	-0.81	-0.57	-0.21	0.34	-0.26	-0.14	0.08	0.04	0.03	-0.10
Müller Tesco	-	-1.68	-	-	-0.10	-	-	0.69	-	-
Pattemores	-	-	-	-	-1.00	-	-	-	-	0.50
Payne's Dairies	-	-0.50	-	-1.00	-	-	-	-	0.50	1.00
Saputo Dairy UK	-1.00	0.50	-	-0.50	-1.50	-	1.00	-	1.50	-
South Caernarfon	-	-1.00	-0.75	-0.75	-	-	-	1.25	1.00	0.75
Wensleydale	-0.59	0.12	-0.17	-0.91	-0.25	0.15	1.21	0.36	0.48	0.53
Wyke Farms	-	-	-	-1.67	-	-	1.15	1.04	-	0.71

NOTES: Price changes are listed as reported by the processors but may not be fully reflected in the AHDB Dairy standard litre price. Prices listed above include the AHDB dairy levy and seasonality schedules.

(1) As of April 2017 the Barber price is based on the 'assured contract', for milk supplied in excess of the base milk volume plus threshold, the price was equal to the AMPE set by AHDB Dairy for the month in which litres are supplied, less 2ppl.

(2) First Milk Manufacture Member Premium calculated on a pro-rata basis linked to a member's level of capital payments.

Will lower milk volumes drive up milk prices?

At the time of writing, we are missing one final week of data from our 2023/24 GB daily milk deliveries, but so far this milk season, volumes have been back by 0.5% on 2022/23. In our latest forecast we expect to see GB milk production for the 2024/25 season reach 12.25bn litres, a 0.6% decline year-on-year. As we approach the spring flush all eyes are firmly on production volumes. However, the continued wet weather has limited grazing opportunities, and compromised grass quality, which will likely limit yield growth. The current unfavourable weather is also likely to impact on yields later this season, with farmers unable to conduct their usual spring groundwork like fertiliser spreading, which may lead to less forage availability.

This suggests that prices may be supported a little as volumes contract and processors look to secure supplies. This is assuming that demand is sustained. If we see demand on the domestic or global markets ease, this will pressure commodity prices and likely feed through to milk prices. In our 2024 market outlook we highlighted that there was some scope for a small recovery in dairy demand, but the picture would remain fairly lacklustre with large players like China still holding off.

GB milk production forecast - March 2024

m litres	2022/23	2022/23	2023/24	2023/24	2024/25	2024/25
	Actual	Actual	Forecast	Yr-on-yr	Forecast	Yr-on-yr
Apr	1,094	1,098		0.4%	1,095	-0.3%
May	1,135	1,141		0.6%	1,135	-0.5%
Jun	1,041	1,045		0.4%	1,040	-0.5%
Jul	1,019	1,028		0.8%	1,025	-0.3%
Aug	989	996		0.7%	990	-0.6%
Sep	976	963		-1.3%	955	-0.8%
Oct	1,033	1,004		-2.8%	1,000	-0.4%
Nov	1,006	976		-2.9%	970	-0.6%
Dec	1,025	1,021		-0.4%	1,010	-1.1%
Jan	1,031	1,023		-0.8%	1,015	-0.8%
Feb	950	941		-0.9%	935	-0.6%
Mar	1,088		1,080	-0.7%	1,075	-0.5%
Year	12,386		12,316	-0.6%	12,245	-0.6%

Notes: Figures in red are forecasts. A 28-day equivalent is used for Feb-24

Source: AHDB

Paired alongside this, the cost of some key inputs like feed, fuel and fertiliser have fallen. This may mean those paid on a cost-of-production basis are less likely to see significant uplifts in milk price. However, higher inflation rates continue to challenge working capital and weigh heavily on farm investment decision-making.

Overall, the dairy industry feels in limbo. There is an impasse between buyers and sellers on wholesale markets, fuelled by uncertainty around future milk supply and consumer demand. The coming weeks will be crucial to setting the market tone for the rest of the season.

April price announcements

Prices on retailer-aligned milk contracts have cooled following growth in recent months. Tesco and Co-op announced a further price hold in April, while Marks and Spencer and Sainsbury's lowered their pricing by 0.7ppl and 0.1ppl, respectively, as production costs tracked lower in the previous quarter.

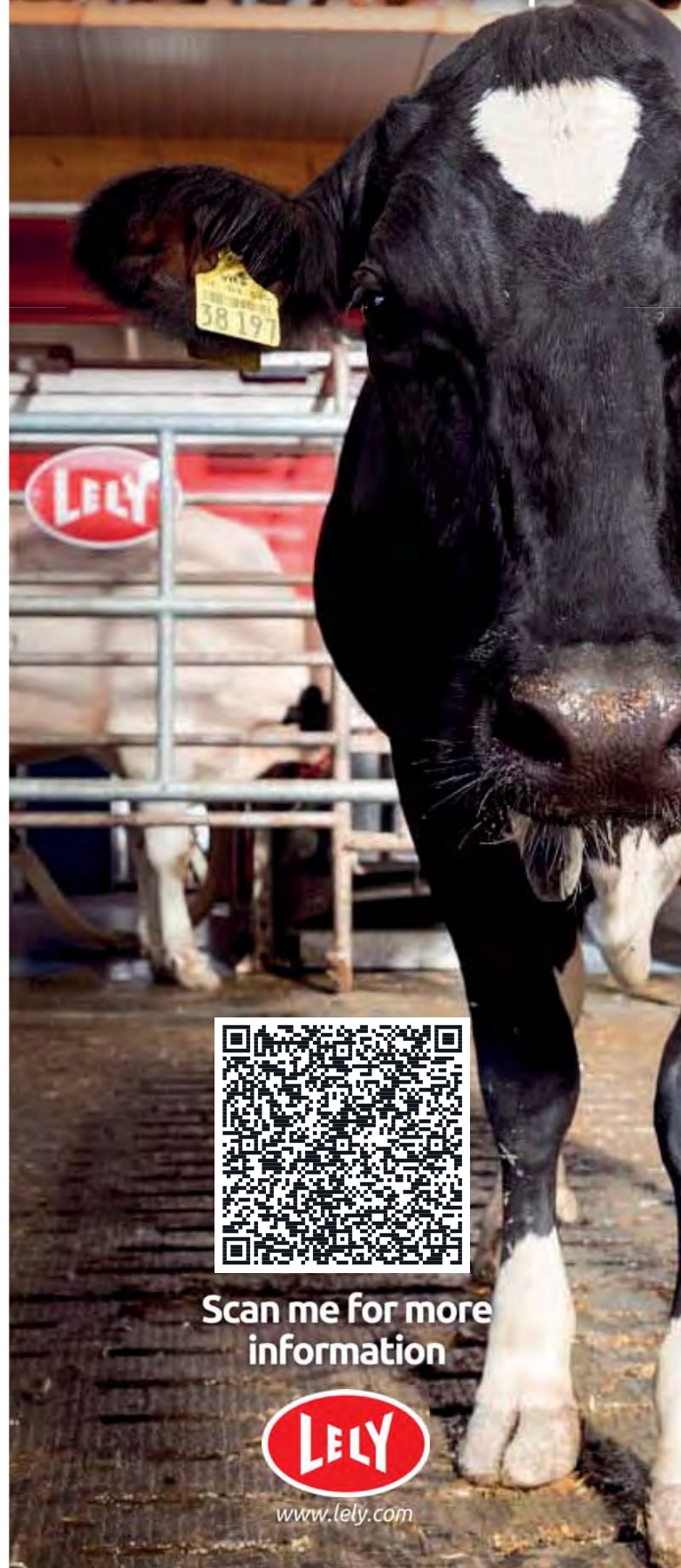
On non-aligned liquid contracts, milk prices have generally seen an uptick in April. Paynes Dairies and Muller Direct have both announced an increase of 1.0ppl, with Crediton increasing its price by 0.75ppl. Freshways continues to hold its price, meaning no change has been made since November 2023.

The changes announced on cheese contracts were in line with those of non-aligned liquid contracts. All processors on the AHDB league table made a positive change in April, with the exception of Saputo, which has held in April after a good uplift in March. Leprino and Belton both moved their prices up by 1.0ppl. Lactalis, First Milk, South Caernarfon Creameries and Wyke Farms all increased their prices by between 0.7p and 0.8ppl. Wensleydale and Barbers made slightly smaller changes in April at 0.53ppl and 0.50ppl, respectively.

Manufacturing contracts have seen mixed movements in April. Arla Direct increased its price by 0.84ppl and Pattermores made a smaller upward movement of 0.5ppl. However, Arla UK adjusted its price marginally down (-0.04ppl), reportedly on the back of quarterly currency movements.

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Traders expecting a decent flush

By Chris Walkland

It's too soon to say whether sentiment in the market is changing from the flush-induced negativity we've seen over the past few weeks. But the first Global Dairy Trade (GDT) auction of April will have helped.

The average commodity price was up 2.8%, after two consecutive auctions which fell. Whole milk powder (WMP), butter and cheddar all posted 3%+ increases, but skimmed milk powder (SMP) still finds itself bogged down in a sea of disinterest, and only managed to post a 1.4% rise. Arla's SMP didn't do much, however, and is still valued at less than £2,000/t.

The commodities convert into a milk price of 33ppl, which is no good to man nor beast. However, UK processors are now paying a healthy premium over the GDT, of between four and 5ppl – and some more than that.

“Normally grazers would have had their cows out for weeks.”

Meanwhile, in Europe, the market has been flagging over recent weeks, as traders expect a decent flush, and see no reason why they need to do anything other than adopt a hand-to-mouth buying strategy. They think milk supply through the flush will be fine (they are right!), and that they don't have to book anything too far ahead. They are probably right about that, too.

And then what?

Well, we're now into April and normally many (if not most) of the grazers would have had their cows out for weeks – either all day or for part of it. Fertiliser would usually have been applied, and thoughts should be turning to first cut silage. But not this year. This spring has been one of the worst in years, with the rain falling in droves. For want of some stats, the Met Office has stated that England saw the highest level of rainfall over any 18-month period since records began back in 1836. I thought I'd point that out in case anyone hadn't noticed. February and

March have been particularly bad for rain.

This, of course, has put the grazing season well out of kilter. According to the AHDB, “the first spring rotation should be around 40–50 days, starting from mid-February and continuing until mid-April...” It's having a laugh this year with that advice: Many farms still have their cows inside, are feeding them winter forage stocks and are using up precious, expensive bedding.

Slurry stores bursting

Meanwhile slurry stores are bursting at the seams and, because there's so much to get out, a lot of that will have to go on thick and fast on the land when it does eventually dry out. That could then further affect grass palatability and forage quality if it has to go on grazing or silage land.

Thus the prospects are currently not looking great for the silage or early grazing season. But it's early days. Peak milk has been the first to second week of May for the past four years, although in 2019 peak milk was at the end of April, so by the time you read this we won't be too far away from that.

But has the penny dropped with traders about the prospects for the flush? Well possibly. Certainly the fat market is much more bullish now compared with the past few weeks, and whereas spot price trades for butter were down in the €5,550/t to €5,700/t (£4,714-£4,886/t) range in the last 10 days of March some trades have been recently been done for €5,900-€5,950/t (£5,057-£5,100/t). Clearly something has made buyers think again.

Unfortunately there is no sign of any bullishness on SMP, and it is still an extremely hard sell. Prices are still below €2,400 (£2,050/t), but the GDT price was well below £2,000. It is going to be a long crawl up for SMP, I'm afraid, and for those whose milk prices largely depend on it.

To give an indication, butter and SMP are converting to a milk price similar to the GDT, of just 33ppl. AHDB's actual milk price equivalent (AMPE) calculation for March was around that price too, after costs (36.6ppl gross, before costs and a processor margin).

“Clearly something has made buyers think again.”

Happily, there's a bit more positivity on the futures markets. They had a torrid time during March after a good February, and lost ground virtually every week through the month. But the last week in March and first few days of April posted some encouraging gains – and prices were up by €360/t (£309) for butter in those two weeks to cross the €6,000/t (£5,143) threshold.

There weren't any contracts above this level during March, but all contracts from May onwards are over it. This is an extremely encouraging sign, and may point to traders thinking the lows are over.

There was some uptick on SMP as well – but only by €50/t (£43) across the two weeks, to a still-not-inspiring €2,450/t (£2,100). The combination

of butter and SMP convert to a farmgate price of 34ppl for April, rising to 36.5p for September. It is still 3p down on where it was at the end of February, however.

Cheese isn't doing much I'm afraid, with the spot market for cheddar barely moving from its £3,500/t base. Despite this, the cheesemakers have done well to increase their farmgate prices this year.

Price increases

In fact, of the 43 price increase announcements from January to May, from 20+ processors, some 34 have been from cheesemakers, and just nine are from liquid processors. Aside from 2022, there have been more price increases this year than in any other year.

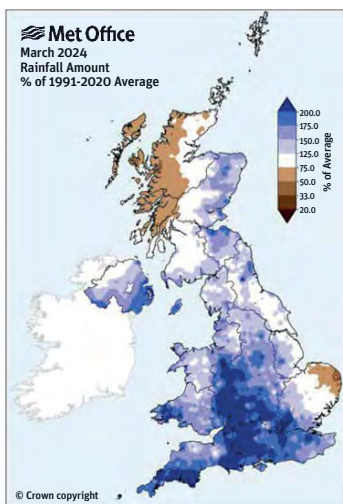
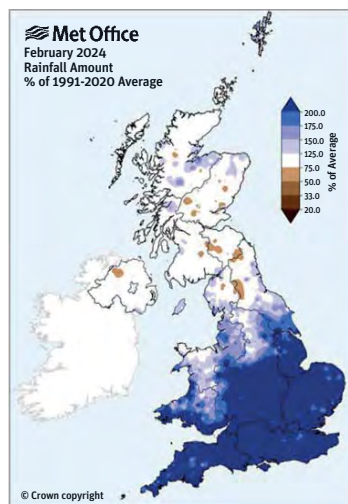
Processors say that demand is still relatively weak for cheddar, which isn't helping the dynamics of the sector. Forward price predictions aren't racing away either – the latest prices only hit £3,600/t in Q4 of this year. Currently, the AHDB puts its milk for cheese value equivalent (MCVE) calculation at 36.28ppl, which is less than 33p after costs.

“The drop-off in volumes will see milk price rewards.”

Once the flush is passed a clearer picture of buyer sentiment and buying patterns will emerge. Everyone waits at this time of year to see what might happen. However, I am also hearing that sellers are standing firm and are not bowing to the negative sentiment that we have seen in the market over the past month.

Unless something major happens with the weather soon, milk volumes are not going to surge. They might not drop much either, though, so I'd expect to see a balanced position. Indeed, the AHDB is predicting a 0.6% fall in volumes compared with last year, to 12,245m litres for GB.

With the market as it is, any excess milk is going to be punished, I think, whereas the bigger the percentage drop-off in volumes compared with last year or even against expectations will see proportional commodity price – and ultimately milk price – rewards.



February and March 2024 have been particularly bad for rain – Met Office

Revolutionising ketosis prevention strategies through technology

Ketosis is a 'gateway' disease, meaning it increases the chances of other diseases developing post-calving.

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Reaping the benefits of investment

Milking 450 pedigree Holsteins, farmer Dave Richards uses the UNIFORM-Agri tool as part of his robust herd health management plan.

"We've put a lot of time and money into our cows, so maximising our return on investment by minimising the risk of ketosis-related losses through early intervention is a principal consideration for us, and Ketosis Risk Alert has helped us to do that" he says.

"Ketosis Risk Alert is a brilliant accompaniment to our farm business," Mr Richards explains. "It's simple to use and being able to tailor it to your farm makes it completely bespoke. I'd recommend it to anyone wanting to ensure a smooth transition period."



Organic opportunity despite the economic and climate challenges

Despite the current woes, the organic dairy industry appears positive, with a more promising outlook for the rest of the year ahead. British Dairying finds out more.

First generation farmer, Dai Miles, took on the tenancy of his Pembrokeshire dairy farm in 1997 and immediately started converting to organic, producing organic milk by 1999.

Starting with 30 cows, 25 years later the Quality Welsh Food Certification (QWFC) certified enterprise now spans 130ha of mixed organic farmland, milking a 120-head predominantly British Friesian herd via a robotic system.

Dai had the ambition to sell his produce to the local community through his own business. In 2000, this is what he and a group of like-minded farmers in the region set out to do, by establishing the Welsh organic dairy co-operative, Calon Wen, for which Dai is Managing Director.

Now with 25 farm members producing more than 20m litres of milk per year, Calon Wen is a leading organic dairy brand in Wales, supplying Tesco, Morrisons and Waitrose, and many other independent retailers across the country.

Despite 2023 being a challenging year for organic dairy production, Calon Wen's milk volumes remain stable and, overall, the co-operative is growing. "Last year, our collective milk volume reached a respectable 22m litres, which is down compared with 2022," says Dai. "I put this largely down to a difficult year for



Dai Miles champions the notion that organic is the ultimate regen system

producing home-grown forage and the affordability of bought-in feed."

Despite a rise in membership, the co-operative's main challenge is being able to produce enough milk to meet the level of customer demand. With the demand for organic remaining relatively high and UK milk volumes recovering, there are opportunities, he notes.

"We must seek efficiencies to remain profitable but, at the same time, we need to grow the number of farmers in organic dairy production and entice producers with the organic premium, which at 12-14ppl is attractive - but only where there's the volume."

Restrictions give opportunity

Dai believes there is an opportunity for further growth in organic dairy farming in Wales, with the introduction of new nitrate vulnerable zone (NVZ) restrictions across the country. "We see the new NVZ rules in Wales as a recruitment opportunity to encourage more dairy farmers to transition to organic," he notes.

"To keep emissions to a minimum, under these regulations farmers in Wales must reduce their stocking densities from typical conventional rates of around 2.5 cows/ha, which would easily exceed the 170kg/ha nitrogen allowance, to a stocking density in-line with those adopted on organic farms.

"Conventional farms may also be hit with additional costs incurred by the need to improve slurry storage facilities to meet the requirements. This will affect a significant number of farmers and it all adds to the business case for organic conversion."

Many businesses are capitalising on the increasingly popular movement of regenerative agriculture, but Dai supports the notion that organic is the ultimate regenerative system, with other systems lacking the same strict criteria.

"Whereas any farmer can call themselves 'regenerative' and pick and choose which regenerative principles they practise on-farm, organic has rigorous standards and legal requirements to abide by, with consequences should you fail to meet them," he explains.

"I'd argue organic is the true regenerative farming. That's why we've added 'regenerative organic' to Calon Wen product branding - we believe organic should own the word because it can be credibly argued why."

"Organic farming is sustainable, with its holistic approach on individual farms, no use of chemicals, and proven research showing restored wildlife habitat - it's fact."

Certifying over 50% of all organic land in the UK, those at Organic Farmers & Growers (OF&G) are mindful that the organic premium must deliver

payback to farmers. OF&G's Chief Executive, Roger Kerr, argues that the supermarkets continue to take a disproportionate share of margins within the supply chain, creating a structural imbalance.

"If multiple retailers provided an opportunity for a market correction to align organic dairy to the historic price differentials between organic and non-organic, that would also help stabilise the market," says Roger.

But Roger agrees with Dai's sentiment on the outlook for organic dairy and acknowledges that an uplift is welcome news. "The short-term outlook for the UK organic dairy sector currently looks stable, with organic feed costs and the differential between organic and non-organic milk prices starting to return to historic levels," he says.

Colossal shake-up required

Roger also points out the opportunity for a rethink of the food system. "The UK has the third cheapest food in the world. Consistently aiming for higher yield through ongoing intensification is economically and environmentally unviable. We'd argue that wider sustainable outcomes are as an important a measure as yield."

Roger suggests food production in its current form requires a colossal shake up. "Largely unable to influence pricing, many farmers have rationalised their production to remain economically viable by cutting costs or increasing yields, frequently both. Even with farm support, all we've seen across all types of farming is falling consumer prices, higher land prices and higher rents, rather than improved farm profitability."

"Continuing to ignore the huge disparity in our food and farming systems is reckless. Resolving this complex issue requires a total shift in mindset," he adds. "A move towards a fairer and more equitable food distribution system, where the environment is seen alongside food production as a key component in measuring productivity, is crucial for true food security."



Roger Kerr, Chief Executive at OF&G

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Organic on the up, but volumes remain well down on past year

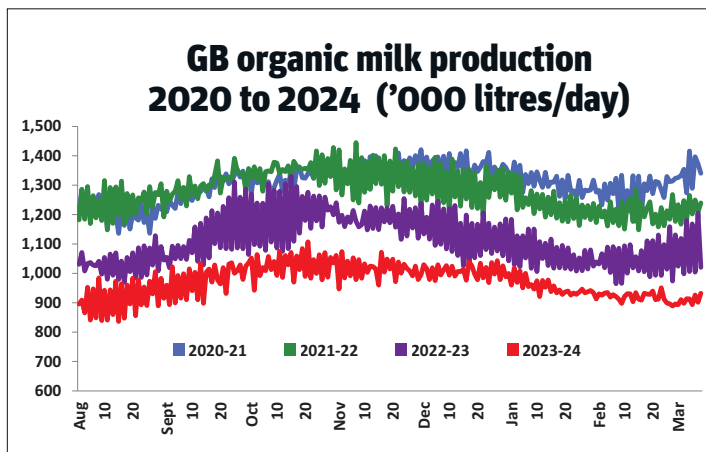
Last year was particularly challenging for organic dairy producers – but things are looking up, according to organic dairy consultant Rob Daykin. British Dairying reports.

Organic retail sales have taken a beating over the past two years or so – not least because organic dairy products cost around 18% more than conventional, according to AHDB. Given the cost-of-living crisis, it is no wonder that people have traded down, notes organic dairy consultant Rob Daykin.

“Although it is tricky to get an exact grip on the fall in sales of organic dairy products, the most recent and reliable data shows that organic milk sales dropped by 14% and yogurt by 16% in 2023, compared with 2022,” he says. “Together these products account for 97% of organic milk sales. Organic cheese sales fell 18%.”

Arla's sales of its organic brand dropped by 7.1% in 2023, due to consumers trading down and shifting towards private label. “More recently though, it has stated that ‘conventional and organic markets continue to pick up’ and that ‘as we move through the first quarter of 2024 a stable market outlook will be welcomed by our farmer owners.’ So good news there,” adds Rob.

Combined with tight organic production, this positivity has resulted in rising prices for organic milk, with Arla increasing its price in March, and Muller and the Organic Herd (formerly Omsco) for April. The latter is now paying 50ppl, with Muller at 48.5p and Arla at 45.46p for a standard litre. However, with



Positive trends indicate rising milk prices alongside a fall in feed prices

milk quality being extremely high, most Arla farmers in particular will be getting several pence more than the base price.

“The future looks positive for the coming 12 months.”

“The average standard litre is just a touch under 48ppl now – the highest price for a year,” says Rob. “And the prospects are for these prices to remain at such levels, as the Organic Herd is reporting ‘sustained growth in demand for the co-operative’s

high-quality organic milk in particular from its UK dairy processor customer base.” Unsurprisingly, the torrid past couple of years saw many organic farmers convert back to conventional production, as they couldn’t make organic pay. Production is therefore extremely tight.

“Production volumes for the past 50 days are down 12.6% on the previous year. This time last year, volumes were down 12.8%. At 942,000 litres/day in the week to March 16, we are still well below the 1m litre/day mark,” Rob adds. “The last time we produced more than 1m litres in a day was in the first week of January: In 2023, there were only three days in which we produced less than that volume in a day, and there were no days at all in 2022. It’s little wonder some companies are recruiting.”

Encouraged to produce more

On the back of this, Organic Herd has launched a drive to grow its milk pool by encouraging existing members to produce more, and through the ‘selective recruitment’ of new members across the UK.

Sales of its organic cheddar brands in major export markets are growing, and new partnerships are developing with those seeking certified PWAB (produced without antibiotics) milk, the firm reports. Organic herd is the UK’s only dedicated source of that for export. “There is little doubt that other companies will not want to lose

any more organic farmers to Organic Herd, so it will be trying to keep their farmers happy,” notes Rob.

Continuing the positive theme – while milk prices continue to climb, feed prices continue to fall, with all of the main feed ingredients easing. Freight costs are also down, by 5% in the week to 22 March, and are now getting closer to the 10-year average (albeit inflated due to Covid).

Best price ratio since 2019

“The milk price: feed price ratio is now just under one, which is the best it has been since 2019,” says Rob. “On the back of this farmers can afford to feed cows properly, rather than to a budget – but it’s hard to see it stimulating additional milk at these current [farmgate] prices.”

With an average compound feed cost of £470/cow, Rob estimates that the milk price would have to be around 52ppl to encourage farmers to feed for extra yield, giving a milk: feed price ratio of 1.07:1. A milk price of 54ppl would give a ratio of 1.12:1.

“That would likely stimulate some extra milk, but would be the highest ratio for over five years.” However, with the torrential autumn, winter, and spring weather, milk could get short as turnout is likely to be delayed further. “This begs the question whether there will be a flush, or certainly how big it will be? And I don’t know of any in-conversion farms that are going to come on stream in the next 12 months, so there’s no extra milk there,” notes Rob. “That why I am as positive about organic dairy as I have been for the past four years.”

“With milk prices rising and feed prices stabilised at their lowest levels since 2021, the future looks positive for the coming 12 months. I would, however, encourage farmers to talk to their feed suppliers and look possibly to fix feed costs through the summer and next winter, as I still feel that there is more risk than reward by holding off purchases. It doesn’t take much of a global event to set prices on the upward trajectory again. I would hate to see any gains in milk price being lost to rising feed prices.”

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Farmers urged to think organic

Conventional and organic farmers face many similar challenges. And you don't have to farm organically to take advantage of some organic thinking. British Dairying reports.

Are weed control and nutrient management really the topics that keep organic dairy farmers awake at night? "I don't think they are," muses Janet Montgomery, Barenbrug's Agricultural Product Manager. "They're important topics, needing due consideration, just as they are for conventional farmers. But obviously organic grass farmers have fewer options available to them, so they use different tactics to achieve the same results."

With grass the most vital input in any dairying system, the strict regulations concerning organic production serve only to highlight the importance of home-grown feeds. That same sentiment is increasingly sharpening the minds of conventional farmers, too.

Farming responsibly

"Many farmers recognise that they have choices to make when it comes to how they farm," Janet points out. "Some would go so far as to say it's their responsibility to farm more effectively, more sustainably. And the way they're doing that is to look at where their farm inputs originate – soyabean meal, for example – and the potential impact they can have if they exercise a different choice or follow a different route."

"That doesn't necessarily mean they're thinking about going organic, but they might look to reduce their reliance on bought-in feed. There's a rising movement in conventional agriculture that some of the practices observed over many years by organic



Organic approaches - like diverse swards - can benefit conventional systems

farmers are applicable in non-organic situations too."

Janet also points to the mushrooming interest in regenerative agricultural practices. "Regen ag can be a little amorphous in terms of what it actually means to practise it," she acknowledges. "But the central themes of soil health, carbon sequestration and biodiversity are now widely accepted."

So can the 'regen-curious' cohort benefit from techniques practised by their organic counterparts? "Absolutely - and one of the first steps is to reframe the talk around what varieties go into the sward," suggests Janet. "We've come a long way in a relatively short time, with additions to the classic ryegrass-based systems."

"Mixtures intended for use in organic systems have always looked different from our more conventional mixtures, because

we've different objectives. But those lines of distinction have blurred, as first herbal leys and then sustainable farming incentive mixtures, or swards for biodiversity, became more common."

Janet, who's responsible for developing the many different mixtures offered by Barenbrug in the UK, says each grass mixture demands a lot of work. "I'm thinking about how species and varieties – particularly new ones – will perform in the circumstances. I ask myself: 'What farming challenge am I trying to provide a solution for?'"

"It's driven by agronomy. For example, am I looking for something which offers farmers a quick spring growth? Are we meant to be delivering winter tolerance? Is this mixture suitable for the summer dry period?"

Organic weed suppression

Unsurprisingly, the primary questions for organic mixtures involve weed suppression and nutrient management. "Organic farmers can't use herbicides and they can't use artificial fertilisers, so we create mixtures that can thrive without those inputs," says Janet.

"But this is where we've started to see real interest from conventional farmers who want to avoid the expense and hassle of spraying weeds, and who want to manage without chemical fertilisers."

Swards designed for organic typically sport a high tiller density, creating a pasture that's always 'on the offensive'. Dense and healthy, weed

seedlings can't compete against grass, or grass-clover stands. "White clover can reasonably provide up to around 150kg/ha of nitrogen, while red – an accessible boost for silage quality – can reach as much as 250kg/ha," she points out.

Another benefit which clover, other legumes and herbs bring to a sward is the variation in rooting characteristics, which in turn is a major driver of good soil health. "A diversity in root depth and structure is very effective in improving nutrient cycling," Janet stresses.

"Different plants are active in different zones, at different times through the year. That has a tremendously beneficial effect on soil health and fertility, keeping nutrients moving through the profile throughout the year."

"That's great for the health of the sward but also for the health of your animals: Research shows that these diverse swards offer grazing animals a more balanced – in terms of minerals and vitamins – intake, plus the different proteins available when grazing involves more than grass alone."

Deeply rooted

Illustrating the point, Janet says that while ryegrass roots grow to a depth of around 15cm, a suitably biodiverse mixture would root 10 times deeper. "And it's not just the herbs and legumes, either. Tall fescue's roots grow as deep as 1.5m, which explains why it remains so productive during dry periods."

The organic movement's early adoption of species like tall fescue is a good example of how organic farming has made the most of its own restrictions, she adds.

"They've simply added more tools to the toolbox. Their solutions are like a patchwork quilt – lots of little solutions or adaptations, recognising that they don't have the blanket options of agchem and fertilisers."

"Instead, it's physical, cultural and temporal control. Cumulatively, these allow for the variation in management approaches which together deliver the desired outcomes. The point is, there's no reason why you can't be a conventional farmer who thinks like an organic farmer."

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Organic dairy demand rebounds

The past 18 months have been challenging for the organic dairy sector, with lacklustre milk pricing. But are prospects indicating they're rising? British Dairying investigates.

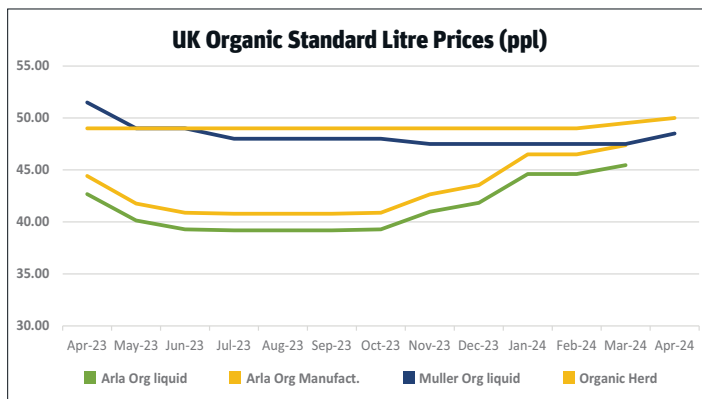
There are some positive signals now being seen in the organic milk sector. All of the major organic milk buyers have increased their milk prices, with members of Organic Herd (formerly Omsco) now receiving a market-leading price of 50ppl for April. These price increases have helped to re-establish the organic premium over conventional, to between 12ppl and 14ppl. Meanwhile, two co-ops (one national and one regional) have launched recruitment drives for new organic members.

Central to this more positive picture has been an encouraging uplift in demand for organic dairy products, both domestically and – as exports become increasingly important – from major international markets. Martyn Anthony, CEO at Organic Herd, is buoyed by the demand outlook. “Although some may say organic has had a tough time in 2023, the continued stable and sustainable milk price performance of both Muller and ourselves demonstrate that demand and subsequently the value of UK organic milk has remained relatively firm,” he says.

“Encouragingly, as we enter the new milk year, we are seeing that domestic consumer loyalty, in relation to added-value organic brands, has rebounded to pre-Covid levels. This has been undoubtedly helped by major investment in both highly creative marketing and new product development by the likes of Yeo Valley. Demand for high-quality, British organic dairy products in key export markets like the US is also growing.” Organic dairy was



Kendamil has soared 400% in sales



Increased organic milk prices have helped re-establish a premium rate

undoubtedly affected more than conventional dairy by Brexit, the pandemic, and most recently the cost-of-living crisis triggered by Russia's invasion of Ukraine. However, it may be a surprise to some that, despite these unforeseen market shocks, the sector has grown, and looks well positioned to grow further. Indeed since 2019, the UK organic dairy market has increased by 22% in value, from £2.476bn to £3.173bn. In that time, the average published organic headline milk price has increased by 24%, from 37.87ppl in April 2019 to 49.25ppl in April 2024.

Notable recovery

The recovery seen in demand for organic dairy products over the past 12 months has been particularly notable, says Martyn. One key factor is the post-Covid migration back to office-based working and in-person meetings, which has helped food services and convenience customers like Pret a Manger, which uses organic milk in its hot beverages. As a result, Pret a Manger reported a 20% growth for the first half of 2023 compared with the same period in 2022.

Organic Herd, the UK's largest dedicated organic milk pool, is also seeing an increase in customer demand into 2024/25. As a result, it has launched a drive to recruit new members across England, Scotland and Wales, with good levels of interest from both established organic dairy farmers and conventional farmers looking to convert. This comes on the back of a strong and stable 2023, in which the co-op's demand for liquid milk rose by 14%

through the year. At the same time, skimmed milk powder increased by 20% and its international cheese brand British Organic Dairy Co was launched into over 400 new stores in the US. As well as seeing sustained growth in demand for leading UK organic yogurt brand, Yeo Valley, one of the key partnerships driving the increased demand for Organic Herd milk is Kendal Nutricare. This produces Kendamil, the only British-made organic baby formula. Kendal Nutricare has increased its organic formula business by over 400% in the past two years and Kendamil is now the fastest growing formula brand in Europe and the US.

Partnership is key

Critically, to trade into such countries, additional certification and production standards, like 'produced without antibiotics' (PWAB) is mandatory. Organic Herd says it's uniquely placed to partner with Kendal Nutricare to supply into this market, having become 100% PWAB certified across its entire supply pool in April 2022. The partnership is key to ensuring that the growing international demand for British organic dairy is fulfilled.

“We really believe in British organic dairy and the quality of farming in the country,” says Dylan McMahon, Head of Growth at Kendal Nutricare. “We're selling our products into 43 countries around the world, with North America, the Middle East and South-East Asia being particularly strong markets for our organic products.” Closer to home, Organic Herd rebranded

in September, introducing 14 distinctive new products into the UK independent retail channel, a sector which has reported a 10% year-on-year increase to top £475m.

“The launch of our premium range has coincided with a gradual upturn in consumer confidence, as the cost of energy and inflation have started to fall back, encouraging more consumers to seek value in their weekly food shop as well as the values that are at the heart of organic dairy,” notes Sara Ogborne, Director of Membership and Communication at Organic Herd.

Reflecting values and costs

“We are employed by our farmers to deliver a sustainable return for their milk; one that not only reflects the intrinsic values of their organic milk but also the costs involved in producing it,” adds Martyn. He considers the prospects for the organic dairy market and his own business to be good. “Our focus continues to be on adding value to our members' milk and returning to them a true organic milk price, not one simply pegged to the vagaries of volatile conventional dairy commodity markets. Central to this is the strategic development of our own branded organic ranges for both export and domestic markets, allied with establishing long-term commercial customer partnerships which reflect the intrinsic value of British organic milk,” he notes.

“However, in truth, unless the dairy industry as a whole – organic and conventional – recognises the mounting pressures on UK dairy farmers, we cannot expect them to continue farming into 2025 and beyond. With increasing requirements for Red Tractor, environmental legislation, health and safety improvements (all important to protect our industry), the pressure and costs on farm continue to mount,” he adds. “As milk processors and purchasers, we all have a responsibility to UK dairy farmers to pay them a stable and sustainable milk price; the forward chain cannot expect them to keep tightening their belts, nor rebounding through wave after wave of volatile pricing.”

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Forage key to heifer growth and early bulling for husband and wife team

Excellent heifer performance on a Shropshire dairy farm starts with good dry cow nutrition and calf management. Rhian Price reports on how success has been achieved.

Achieving growth rates of 0.9kg/day up to bulling at 12 months with modest concentrate inputs is no mean feat. Yet heifers at Meadow Bank Farm, Shrewsbury, are hitting this while only being fed forage and a small amount of concentrate (1-2kg) after weaning.

Once heifers reach 11 months, they are on silage only until they enter the pre-calving group around 22 months. Youngstock performance is uncompromised – currently, heifers are averaging 10,790 litres in their first 305-day lactation and the average age of first calving is 22-23 months.

Husband and wife Steve and Ruth Ashley credit this success to getting heifers off to the best start and making good-quality forage. The duo milk 105 Holsteins through two Lely A4 Astronaut robots and are achieving enviable yields of 14,300 litres at 4.11% butterfat and 3.34% protein. The cows have a 12-month rolling pregnancy rate of 32%.

It is unsurprising that the couple was highly commended in the youngstock health and welfare category as well as being commended in the High-Performance Dairy Farm at last year's Cream Awards.

“Bales are not an excuse for poor silage.”

Setting up a heifer calf for a successful lifetime performance starts in the dry cow shed, the couple believes. Together with nutritionist, Neil Howie from Agri-King, they have a shrewd focus on dry cow nutrition. “Good nutrition of dry cows and heifers is paramount, because at that stage, they are feeding the unborn calf and making colostrum,” says Neil. “This is the most important feed the heifer will get in her life.”

Cows and heifers are housed together in a state-of-the-art dry



Steve and Ruth Ashley credit farm success to getting heifers off to the best start and making good quality forage

cow shed for 60 days, with the far-off and close-up groups under one roof to reduce stress. Animals have deep sand-bedded cubicles, and the shed has wide passageways and more than 1.2m/cow of feed space.

Far-off dry cows receive haylage, minerals and a small amount of blend. Three weeks before calving, they are moved to the next-door close-up group and receive a full dietary cation-anion balance (DCAB) diet. Heifers receive baled silage and are moved into the close-up group six weeks pre-calving.

Urine pH is monitored weekly to ascertain if cows are sufficiently metabolically acidified pre-partum to prevent milk fever. The ideal pH range is 6-6.5. The DCAB diet comprises grass silage, maize silage, hay and blend alongside choline and methionine. There have only been two cases of milk fever in the past 12 months (<2%).

“We constantly monitor the ration energy and protein levels to mitigate

negative energy balance,” says Neil. “Protein supply is also important for colostrum production.”

The target is for the total ration to supply 14% crude protein (30% bypass protein) and 10-10.5MJ/kg metabolisable energy (ME), he says. At the far end of the shed, there are four straw-bedded calving pens. These have a locking yoke and a calving gate to enable animals to be safely secured.

Accurate warning system

The Ashleys operate just-in-time calving, and to make this as effective as possible, cows are fitted with MooCall sensors as they start to bag up with milk. Wi-fi cameras have also been installed inside the shed to help monitor progress during calving. Ruth says the warning is pretty accurate at predicting calving within an hour, so cows can be moved to straw pens without the move delaying the onset of calving.

Post-calving, fresh cows receive 50 litres of warm water, an energy drink, and a non-steroidal anti-inflammatory (NSAID). They are introduced to the milking ration and are milked immediately with a portable machine, so their calf gets its dam's own colostrum, providing the colostrum score is high enough (>25%) using a Brix refractometer.

Calves receive colostrum for the first three days of life before moving onto four litres of skimmed milk powder daily alongside fresh clean water, barley straw and starter, both of which are fed ad-lib. Bloods are taken from calves to measure passive transfer and the results act as a precursor for dry cow diets.

Once calves are six weeks old, milk is reduced to three litres fed twice daily to encourage high intakes of starter and prepare calves for weaning. Then, at eight weeks, milk is reduced

Continued on page 30.

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Continued from page 28.

further, provided they have doubled their birthweight. Finally, it's cut back to one litre for a week at nine weeks.

Despite the fact that calves are vaccinated at three days old with an intra-nasal vaccine for pneumonia, Ruth admits they were still getting cases, particularly around stressful periods like weaning and disbudding.

“Colostrum is the most important feed the heifer will get in her life.”

For the past year, she has been lung scanning to detect pneumonia alongside Duarte Monteiro from Shropshire Farm Vets. Together, Ruth and Duarte have developed a scanning protocol.

They scan one week after disbudding (four weeks of age), one week after weaning (nine weeks) and before calves move into a post-weaned group to ensure they are healthy. Lung scanning costs £6/scan (£18 for three scans), but Ruth says the information has helped them to

Cow health and milk production for the past 12 months:

Mastitis	6%
Lameness	<6%
Body condition score average	2.75
Selective dry cow therapy	85% of cows given teat sealant only
Somatic cell count	115,000 cells/ml
Bactoscan	9
Peak production	71.8 litres
Herd daily production average	49 litres/cow
Left displaced abomasums	1 case
Retained foetal membranes	5%

halve antibiotic use. Calves are given a score between one and five, with five indicating substantial lung damage.

“We tend to see three as a worst-case scenario but if calves score three, we don't breed from them because they never fully recover,” Ruth explains.

“The idea is to wean clean because the stress of the group change is enough. If anything scores a two, we will leave it, treat it and scan again in two weeks to ensure the treatment has been effective.”

On the back of the results, they have changed the timing of disbudding. “We used to disbud at

five weeks, whereas now we do it at three weeks and lung scan one week later,” says Ruth. “The bigger the gap between disbudding and weaning, the less impact the changes have on the calf and the greater chance of recovery from illness.” The buds are also smaller, which makes it easier, she adds.

“Cows have a 12-month rolling pregnancy rate of 32%.”

Once in the weaned group, heifers receive haylage bales before transitioning to bale silage at six months alongside 1-2kg of concentrate.

At 11 months, concentrate feeding stops and heifers receive an Agrimin bolus alongside a Lely collar to detect heats, ready to start serving from 12 months. On average, maiden heifers are receiving 1.3 straws of semen per conception, with 80% served to

sexed semen. “I did not think it was possible to rear heifers as the Ashleys do with as little concentrate as they feed,” admits Neil. “They are getting heifers pregnant just on forage, a small amount of concentrate and a vitamin bolus.”

However, making good-quality forage is crucial to enable the removal or reduction of concentrate. “We are looking for 16% crude protein as a minimum and an ME of 10.5-11MJ/kg,” says Neil. “We spend much time working out which forage we have available. We don't judge on cut; we judge on analysis.”

Bales part of the strategy

Currently, heifers are eating fourth-cut bales. “Bales are not an excuse for poor silage,” explains Neil. “They are expensive to make. They are part of the strategy at Meadow Bank, not just a tidy-up. With the growing seasons as they are, later-season grass can be every bit as good as early season.”

Steve operates a multi-cut silage system, carrying out five to six cuts throughout the growing season. In the past two years, an increasing focus has been placed on soil health.

“Good crops grow from healthy soils,” says Steve. “I'm learning a lot about soils. We are carrying out more aeration and sward lifting and trying to plough less.”

He has started introducing clovers when reseeding, and sowing grass after maize to protect the soil. This season they will be using compost on maize fields to boost soil biology. Steve explains: “We are starting small with a homemade Johnson-Su Bioreactor (compost in an intermediate bulk container or IBC) and we will see how that goes, then perhaps move to a larger-scale Bokashi system.”



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Farm Facts:

- Milking 106 Holsteins through two Lely A4 Astronaut robots
- Farming 186ha, 46ha owned, the rest rented
- 305-day lactation average of 14,300 litres for cows at 4.11% butterfat and 3.34% protein
- 305-day lactation average of 10,790 litres for heifers
- Rolling pregnancy rate of 32%
- Supplying Muller/Co-op
- All beef calves finished
- Animals vaccinated for bovine viral diarrhoea and infectious bovine rhinotracheitis and monitored for Johne's, leptospirosis and neospora
- Employ one full-time and two part-time staff.

In the latest episode of its On the Farm Youtube series, British Dairying visited Meadow Bank Farm. Together with the Cream Awards' Young Dairy Farmer of the Year, Charlotte West, who also won the Youngstock Health and Welfare Award, Ruth Ashley and her nutritionist Neil Howie gave their top tips for heifer rearing. To watch the episode, go to: www.youtube.com/@youddairy1645



The latest version of an innovative digital feed management system is transforming the way producers are feeding their dairy herds, improving cow performance, productivity and margins, while helping reduce farm carbon footprints.

Providing exclusive access to advanced data and analysis, including new and unique forage stock management features, Feedlync 2.0 by Cowconnect is improving efficiencies in weighing and feeding, helping producers reduce overspend and increase accuracy.

Feedlync 2.0 ensures feed is mixed precisely so that cows get the correct ration every time, helping to save on feed costs, while also reducing wastage, ultimately reducing the carbon footprint of a litre of milk.

As such, the digital, cloud-based feed management system also counts towards Arla's Sustainability Incentive.

New and exclusive features

Operated via app (iOS and Android) and online portal, Feedlync 2.0 enables producers to analyse feed accuracy quickly and easily, allowing for instant adjustment of feed composition and cow numbers.

ACCURACY AND IMPROVED FEED EFFICIENCIES HELPS CUT OVERSPEND, BOOST MARGINS AND REDUCE CARBON FOOTPRINTS

“This allows farm nutritionists to manage the diets even when not on farm”

“This allows farm nutritionists to manage the diets even when not on farm,” explains Clare Farrington, Sales & Business Development Manager.

With the unique loading accuracy heatmap and stock management features, operator accuracy and stock levels of all ingredients can be monitored, with the access to real-time updates on forage stocks particularly popular with producers.

“Users will be informed of how many days of forage are left in a clamp or how many days until a delivery is required for concentrates. No other feed management system delivers these features,” adds Ms Farrington

“We can accurately monitor and analyse how much food we are using, as well as the time and the labour required to feed the cows.



It shows where we can improve efficiencies and productivity, while also minimising wastage. All this combines to help reduce our carbon footprint.”



John Banks of Wildon Grange adds, “We have found Feedlync 2.0 to really support our accuracy, helping us to calculate how much it is costing us to produce a litre of milk. “It is simple to use and allows us to track all costs and cow performance, and because it is live, we can see what is going on all of the time. It has certainly helped improve our feed efficiencies, in doing so helping our margins.”

“It is simple to use and allows us to track all costs and cow performance”

Return on investment

Providing accurate data on consumption of feedstocks, the components of the ration and the ability to monitor feed costs, the Feedlync 2.0 system increases feed accuracy on average by 4%. With less feed used to produce a pint of milk, users can expect a return on investment within an average of just 94 days.

Precision approach to reviewing soils and nutrition is a win-win

A concerted focus on soil health and nutrition digital analysis is helping to improve resilience and efficiency on one Cornish dairy farm, as British Dairying discovers.

With 950 dairy cows and 750ha of cropping, Martin Dairy is a large enterprise that recognises the importance of being as resilient as possible to the environmental and financial pressures facing the sector.

The farm grows a range of crops, including forage maize, winter wheat for crimping, winter and spring barley, forage rye and grass on predominantly silty clay loam soils, much of which is rented from local landowners.

Richard Martin, who heads the arable operation, believes soil health is at the heart of improving resilience. He is working with Hutchinsons agronomist, James Whatty, to make some significant changes, based on a more detailed understanding of soils gained through in-depth soil testing and the latest digital scanning technology.

Traditionally, the business has operated a plough-based establishment system, but Richard knows this can present challenges in some seasons, and believes reducing tillage intensity is key to improving the soil's resilience to more extreme weather.

During autumn 2022 with that in mind, he hosted a direct drilling demonstration on a field coming out of maize going into winter barley. Before the demonstration, a Healthy Soils Gold test was conducted on the land to understand the soil



Digital mapping provides detailed nutrient and physical soil properties

characteristics better and the most appropriate management techniques.

Testing confirmed that soils were generally in good condition, with high organic matter content at 7-12%, and high fertility, given the use of organic manures and slurry over many years. The buffer pH was also relatively high at 7-7.5, indicating soils will naturally revert to a higher 'resting' pH.

The carbon:nitrogen ratio was very low though, at 7.5:1, when the optimum is 24:1. "With large quantities of organic manures applied through the rotation, this low ratio means nitrogen can be rapidly released from the soil through mineralisation, potentially meaning we are not fully utilising the nitrogen within the system," explains James.

This is something they are looking to manage with more tailored cover crop mixes (see panel).

Although the farm has not converted to a full direct drilling system, non-inversion tillage is now used for establishing cereals, based around a Sumo Trio and a 3m Pottinger combination drill. "We haven't ploughed anything for autumn cereals for two years now," says Richard. "It's been a big change, but considering how wet it has been over the [2023/24] winter, our fields travelled reasonably well this spring because they haven't been ploughed."

"I'm not saying it's perfect; there are still problems to overcome, but it's definitely quicker, is saving us a bit of money on establishment, and I feel is doing a better job by letting the soil do some of the work for us."

Keen to try new approaches

Flexibility is key though, and land going into maize is still ploughed, Richard notes. "We find ploughing is a good way of aerating the soil and creating a nice seedbed for maize to go into, and helps us to incorporate organic matter."

"Saying that, we're keen to try new approaches. We've trialled a Horizon strip-till drill for maize, but the kit is very specialist, and last year we tried drilling some maize with the cereal drill, which worked okay, but still wasn't as effective as the specialist maize drill. Ideally we'd like one machine capable of

doing everything." As part of the focus on soils, Richard is also digitally mapping soils across the farm using Terramap high definition scanning, which provides a comprehensive picture of all common nutrient and physical soil properties in far greater detail than conventional grid sampling, mapping over 800 data reference points per hectare.

So far, around 65ha has been Terramapped, and he hopes to have the whole arable area scanned on a rolling basis over the next five years, with results uploaded to Omnia for analysis. "Terramapping has already opened my eyes to the variations in some fields," says Richard. "The first fields we mapped were on sloping land deliberately chosen because it was likely to be more variable, but even so, some results were still a surprise. Phosphate and potash, for example, showed particular variation, with higher levels at the top of the slope than further down, which was the reverse of what I expected."

Mapping in-field variability has opened the door to variable input applications, principally fertiliser, but he also plans to try variable seed rates on cereals this coming autumn. "The cost of soil testing is soon paid for by the savings you make applying fertiliser where it is needed, and it's the right thing to do environmentally." They have also started using micro-nutrition starter fertilisers in maize (Primary-P), to reduce reliance on diammonium phosphate (DAP), which has historically been applied at a flat rate on the drill. Variable rate starter fertilisers are a future possibility, although this will require investment in a new drill, so Richard wants to be confident in the approach before making such a move. Last season, they also tried reducing DAP rates on one block of land with high P indices, with no starter fertiliser, and maize performed well with no obvious yield differences to the standard DAP approach.

Elsewhere, variable rate nitrogen is being tried for the first time this

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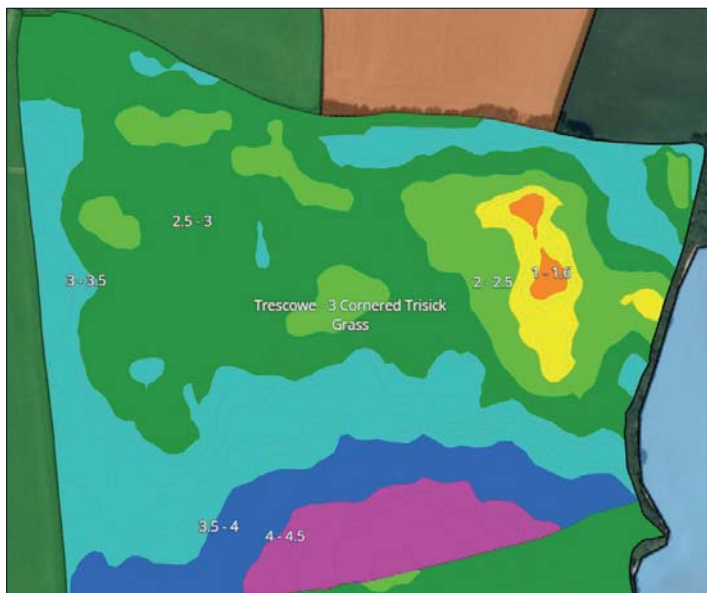
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spring on an 18ha block of winter barley. Rates were varied according to normalised difference vegetation index (NDVI) imagery available through Omnia, with more nitrogen applied to boost lower biomass areas, and less to denser parts. From a baseline of 85kg N/ha, rates varied by +/- 15-20kg N/ha, James notes. "It'll be interesting to see how that evens the crop up and whether there is any impact on yield."

Last season, they also trialed a foliar bacterial nitrogen-fixing product to see if it could help better utilise high levels of soil nitrogen. James says results were encouraging, with a 1t/ha yield response, so it is something they plan to try again this season.

Variable rate confidence

If variable fertiliser applications prove successful on cereal ground, Richard hopes to expand its use to the grassland and maize areas in future, possibly including variable rate slurry applications, although again, he needs confidence it is the right approach before investing in any new equipment. "My goal is

to farm the land as best we can, as efficiently and responsibly as possible. It's not about chasing the highest yield. I want a profitable yield, and good quality forage that gives the cows a high-quality diet."

Cover cropping

Cover crops are an important part of the rotation, with 40-60ha in the ground most seasons, usually to protect soils over the winter, between winter barley harvest and sowing maize the following spring.

Richard has previously favoured forage rape for this, grazing it over winter with either cattle or sheep. "However, in wet winters, cattle can cause some damage to the soil, so we want to explore alternative mixes that are more tailored to what the soil needs, but can still be grazed by sheep."

The farm has recently purchased a second-hand 6m Vaderstad Rapid drill, primarily for sowing cover crops behind winter barley. But Richard also plans to use it to over-sow legume and herb seeds into existing grass leys as part of the sustainable farming incentive herbal leys option (SAM3).

Farm Facts: Martin Dairy, Trethick Farm, Bodmin

- 950 dairy cows + 800 followers (Swedish Red cross Holstein dairy cows averaging 9,000 litres)
- 750ha of cropping (110ha owned, most rented)
- Cropping includes maize, winter wheat, winter and spring barley forage rye, grass
- Soil type is mainly light loams with some heavy clay
- Currently hosts Helix Cornwall demonstration
- Using Terramap and Gold soil testing to tailor management and input use
- Initial focus on cereal ground, but plans to expand the approach to forage crops in future.

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The RABDF / NMR Gold Cup is the most prestigious award in the British dairy sector – attracting entries from some of the best farmers throughout the country. Picking up the trophy this year is Bisterne Farms in Hampshire. Olivia Cooper pays them a visit.

The first thing that strikes one upon arrival at Bisterne Farms is that this is a team affair. Immediately welcoming and open, they sit me down with a cup of coffee as they settle down for breakfast – something they do together every day. “That’s really important,” says Farm Manager George Brown. “We also have weekly team meetings and everyone has their areas that they focus on.”

“For Hallam it enables a motivated person to take over the business.”

The team comprises James Dunning, Charlotte Lawder, Oliver Mears and Adam Reddish, who are all full-time, and Rowan Hewlitt and Brandon Lynch, who are part-time. There are usually some vet or agricultural students on-site as well – today it’s Hayley Shone who is being shown the ropes. “It wasn’t that long ago that I was on a placement and didn’t know anything,” says George. “It’s very important to give younger people a go – it’s about climbing the career ladder but not pulling it up after you.”

And there’s no doubt that this is a business set-up. Estate owner Hallam Mills has other business interests, but wanted to keep the farm running,



Winning the RABDF/NMR Gold Cup is only just sinking in for the young and humble team at Bisterne Farms

so five years ago Tony Evans at Anderson Consulting suggested a contract farming arrangement. George was the chosen candidate, and the partnership has been a great success. “You couldn’t ask for a better person to work with,” says George. “Hallam is fully involved with the strategic direction of the business and will get stuck in if needed.”

Hallam provides the fixed infrastructure and George the power, labour, machinery and other inputs. George owns one-third of the cows and gets a contractor’s fee to cover operational costs. All the capital gets

paid a return, and then surplus profits are split between the two. “For me, it was a good way to be involved in a business that’s a lot bigger than I could have made myself, and for Hallam it enables a motivated person to take over the running of the business.”

Split block-calving

Although the dairy was built in 2001, the design was excellent, which means it’s very easy to run and kind on the cows. And George likes to keep the system simple – even though at first glance split block-calving might sound unnecessarily complicated.

“Four or five years ago, we had 500 spring-calvers, but this is a very dry farm with gravelly, free-draining soil,” he explains. “If we don’t get rain for two weeks we really struggle with grass drying up, and end up feeding over the summer. So we decided to take the load off the grazing platform by split calving.”

In an ideal world, George would like to calve all the cows in the autumn, but the infrastructure isn’t there, and the investment would be hard to justify. “We can only house 400 cows – and split calving takes out the peaks and troughs, which is useful with an employed team.”

A third of the 600 Kiwi cross (New Zealand Friesian x Jersey) cows calve

in the spring, with the remainder in the autumn, and the system for both is the same, for maximum simplicity.

The autumn cows calve inside from August 1 for six weeks, are grazed in August, housed overnight in September, and then fully housed from October to January. They are served from November 5 for six weeks, and then start grazing by day in February before full turnout from mid-April. “They dry off in June and then are housed for the transition period,” says George.

The spring herd calve indoors from February 1 for six weeks, and are grazed by night from February before full turnout in mid-April. “We run out of space in the cubicle shed, which is why one herd grazes at night and the other during the day.” The spring cows are served in May / June, dry off in December and outwinter on fodder beet before coming in to calve.

“We have a dedicated calving shed on straw, and feed bales of hay from the meadows,” explains George. Calves are taken straight off the cows, and given 10% of their bodyweight in cows’ colostrum. They’re kept in groups of 13, with heifers then



Housed cows self-feed from silage clamps of grass, maize and red clover

Continued on page 36.

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Continued from page 34.

moving onto milk powder, and beef calves onto whole milk.

The beef calves are sold at three weeks, mostly privately, and the team take great care to optimise their health and growth. "We rear 400 beef calves a year and there's a big difference in price between good and poor calves, so we use good semen and pay attention to their management."

George only keeps replacements from the autumn calvers, breeding the spring calvers to beef semen. "It's just simpler – otherwise we'd end up with four groups of youngstock."

Improvements in calf health

The heifer calves get milk powder twice a day for four weeks before moving onto 1.1kg of powder once a day for another four weeks. "They wean at eight weeks having eaten 50kg of milk powder," says George. "We used to feed less of a poorer quality powder and struggled with calf health. The solution has been to give them more energy and more powder – and it's made a monstrous difference."

The plan is to have all calves weaned by the time artificial insemination of the cows starts, and the calves are



The cows are milked twice a day through the 50-point rotary parlour

fed silage and cake over the winter while housed. "They're turned out in March having eaten 500kg of an 18% rearer cake." Once at grass all supplementation ends.

George synchronises the heifers and puts 65-70% of them to sexed dairy semen, with the remainder going to conventional – although once his semen stock is used up he's likely to move to all sexed. All heifers calve in the autumn block,

at two years old, and George selects breeding stock based on good udders, capacity and attachment, with high milk solids. "Most of our culls are due to udders or fertility. We're asking for reasonable production from them, so we need good udders."

Breeding preferences

The cows are heat-detected using tail paint and scratch cards, and about two-thirds of them go to sexed semen in the first three weeks of the autumn. The rest have Blue and Hereford semen for three weeks, then Blue and Angus for the second three weeks.

"I much prefer the Angus calves but they look like Jersey crosses and we don't want to accidentally keep Angus heifers!" A Hereford stock bull sweeps up, and any empty cows roll to the spring herd.

The cows are milked twice a day through the 50-point rotary parlour, at 5.30am and 2.30pm, with the whole process including washdown taking about four hours in the morning and three in the afternoon. They're yielding just over 6,000 litres at 5% fat and 4% protein, producing 524kg of milk solids. "Last August we peaked

at 560kg of milk solids on a rolling basis," says George.

Milk is sold to Arla on a Care contract, and the herd is averaging 3,500 litres from forage. "That's down slightly as the silage last year wasn't as good quality." The cows also get cake in the parlour, and there's only 20-30kg difference in milk solids between the autumn and spring calvers. "The autumn calvers eat more cake and produce more solids."

"Most of our culls are due to udders or fertility."

When it comes to forage production, the 1,620-ha estate comprises about a third arable, a third woodland, and a third dairy. It has 509ha of grass, 20ha of fodder beet, and 50-70ha of maize. Within that, 200ha of grass is in a Site of Special Scientific Interest, so is managed for wildlife, while the milking platform extends to 180ha.

"We try to reseed 10% a year, although over the past five years everything has at least been stitched in," says George. The 70ha of red clover is rotated around the arable land every four years.

All land work is carried out by contractors, with first cut taken at the end of April, second cut a month later, third cut in July, a fourth in August and the fifth in early October. "The first and second cut go into the clamps, and everything after that is baled."

When housed, the cows self-feed from the silage clamps of grass, maize and red clover silage. On average



Calves are kept in groups of 13, with great attention paid to their care

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Planning has been secured for a new slurry tower, boosting storage capacity

Continued on page 38.



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Key focus	Epigenetics	Development	Resilience	Productivity	Longevity
Trouw Nutrition programmes					
					
					



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Continued from page 36.

the autumn-calving milking cows have 20-22kg dry matter intake per day including 6kg of cake, 1.5kg of rapemeal and 15kg of grass and maize silage in a 50:50 mix. "It's up to them what they eat – they will take what they need," explains George. "The hardest bit is maximising utilisation while also making sure the cows are fully fed."

Grazing cows are rotated onto fresh pasture after each milking, with a 20-day rotation. The grass gets 30kg/ha of nitrogen in March, April, May and June – then none over the summer when it burns up – followed by another 30kg in September. "Any surplus is taken for silage, and anything that's looking a bit scruffy will be grazed by dry cows," says George.

Quality health and wellbeing

When it comes to cow health and welfare, the well-designed set-up and robust cows mean there are very few problems to tackle. The herd is mobility scored quarterly, with 2.5% of the herd scoring a two or three, and they're foot trimmed at drying off if they need it. "We don't footbath, and digital dermatitis isn't an issue – we've had two cases in the past year." The only issue in the past year has been a bit of white line disease, as the cow tracks suffered in the wet weather, leading to some stone damage.

Rubber matting at the parlour exit, tarmac at the self-feed clamps, long feed windows and patient moving of cows all contribute to this good foot health. "The cows bring themselves in – we never have to follow them, and have never culled for lameness," says George.

When youngstock are turned out they get a fly tag and a long-acting wormer – in-calf heifers outwinter on fodder beet before being brought into the cubicle shed to learn how to self-feed. The herd is screened for bovine viral diarrhoea, leptospirosis,



Increasing weather extremes with hot, dry summers and wetter winters can put a strain on the grazing platform

infectious bovine rhinotracheitis and Johnes. "We're a closed herd apart from buying three Hereford stock bulls every other year."

Being on the edge of the New Forest, there is a lot of wildlife in the area, so George fences off badger setts and tries to keep deer away. "Deer are a big challenge – so we don't feed anything at grass." The farm is in a TB edge area, and the last breakdown was in 2016 from a purchased bull. "Buying in bulls is our main risk"

Stocking pressure

Other health challenges are minimal: Mastitis coincides with calving and autumn housing, when the stocking pressure in the shed is at its highest, but the 12-month average mastitis rate is just 18 per 100 cows. Cubicles are bedded with sawdust and lime.

Antibiotic use is at 7.03mg/kg population corrected unit, with critical antibiotic use at zero. "Our mortality rate over 12 months is 1.4% and our vet spend per cow in 2023 was £24.18 versus a practice average

of £64.40," says George. "We don't vaccinate, we have no fertility work and no calving issues; it makes for a big saving."

Future proofing the farm

The team have also been taking steps to future-proof the farm – they've just secured planning permission for a new slurry tower and a cover for the existing tower, thanks to some grant funding. "Once that's done we'll be set up for the next 20 years, as we'll have six to seven months' storage," explains George.

Slurry is applied using a dribble bar, and drinking water comes from a recently-drilled borehole.

"Investment for compliance is a huge hurdle for the industry, especially when set against the lack of profitability over the past 20 years, and high interest rates," he admits.

Weather extremes

The increasing weather extremes are also a challenge, with hot, dry summers and wetter winters – which is why he has already split the cows into spring and autumn calving blocks. "And if we're grazing cows further afield during hot periods then we'll graze at night, so they don't have to walk far in the day."

Carbon neutrality is a universal industry target, and George is working towards that by removing soya from the diet, reducing fertiliser use, and increasing clover use in grass leys. "We're also breeding more efficient cows – there are a lot of opportunities with genomics," he notes. "It's been very difficult with a crossbred herd, but I think that will change quickly."

Labour is another issue, but not

one which Bisterne Farms is struggling with. "We have a great team – and I think our decent set-up and staff rota helps to attract and keep good staff," says George. Staff work 45 hours a week, get three days off per fortnight, and 28 days holiday per year.

"The image of the industry is atrocious for attracting new entrants, and for Hallam public engagement is really important." The whole estate is in Countryside Stewardship, and is now layering in Sustainable Farming Incentive options – and it takes part in Open Farm Sunday every year. "In 2022 we had 4,000 visitors, and last year we had 1,600 despite the rain," George points out.

"It's wonderful to celebrate that good story."

"We do a lot of public engagement, with ex-offenders, charities, young farmers, universities and Scouts. We're proud of what we do here, and we can't whinge about the public not knowing about farming if we don't open our doors."

And the farm will most certainly be opening its doors on May 22, when it hosts the Gold Cup Open Day. Winning is something that's only just sinking in for this young and humble team of people. "It's fantastic for the estate owner, and really great for the team," notes George. "And it's wonderful to celebrate that good story for the industry."



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Early intervention crucial for ketosis control during transition

Sub-clinical ketosis affects between 10% and 60% of cows in UK herds, so how can monitoring dairy cows during the transition period minimise the impacts of the disease? British Dairying explores how using herd management software can reduce the risks.

During the transition period, increased energy demands – stemming from foetal growth, calving, and a rapid increase in milk production – coupled with a reduction in dry matter intake, cause a negative energy balance. This can lead to ketosis.

“The three weeks pre- and post-calving require a huge amount of energy, and with foetal growth limiting a cow’s dry matter intake, there’s an energy gap that can’t be filled,” explains Katherine Braker, Key Account Manager at Elanco. “When this modified metabolic state causes a build-up of ketones in the blood, milk and urine, ketosis then occurs.”



Ketotic cows are 5.2 times more likely to suffer from a left displaced abomasum

Identifying ‘at-risk’ cows early is crucial to minimise the consequences ketosis can have on a herd. Katherine recommends using dairy herd management software, like Uniform-Agri, to pick up anomalies within the herd, allowing early intervention. “The programme includes a Ketosis Risk Alert element which will flag up ‘at-risk’ cows based on a range of risk factors,” she explains.

“A bolus can help plug the energy gap.”

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The disease presents itself in two states – clinical and sub-clinical. Clinical ketosis can be identified through reduced appetite, poor rumen fill, and a reduction in milk production. But cows suffering with sub-clinical ketosis often show little to no symptoms, meaning the disease can go unnoticed despite its negative impact on performance.

“Even the most advanced preparation won’t eliminate the risk of ketosis.”

“Ketotic cows are 5.2 times more likely to suffer from a left displaced abomasum (LDA), as well as being 2.4 times more likely to be at risk of early culling,” says Katherine. “The disease also affects fertility and has a detrimental impact on milk production – reducing a cow’s chance of conception by 50% on their first artificial insemination, as well as having the potential to reduce milk production by 358kg in cows and 534kg in heifers in a projected 305-day lactation.”

“The software will look at specific parameters like parity, length of dry period, yield in previous lactation, milk fat-to-protein ratio, expected twins and more. It then automatically identifies ‘at-risk’ cows, allowing farmers to intervene before ketosis develops.”

Understanding the prevalence of the disease through monitoring applications allows producers to make early changes to their system, helping to maintain feed intake ahead of, and during, the critical transition period.

“As always, there will be outliers within the herd where even the most



Elanco’s Katherine Braker

advanced preparation won't eliminate the risk of ketosis," notes Katherine. "In these circumstances, prevention methods are crucial."

In cases where a cow has been identified as 'at-risk', Katherine encourages the use of a monensin bolus to help maintain the cow's energy levels. "A bolus like Kexxtone can be given to cows to 'plug' the energy gap experienced during the transition period," she says. This has been shown to reduce the prevalence

of ketosis by 74%, demonstrating its significance in maximising dairy herd performance.

The bolus should be given three to four weeks pre-calving and it lasts for 95 days, covering peak lactation. "Once administered, monensin is continuously released into the rumen over a period of time to support the production of propionate. This is needed to produce glucose, resulting in more energy, therefore decreasing the risk of ketosis."



Chris Gowan has seen clinical ketosis fall to single digits in trialling software

Ketosis risk alert in practice

Wiltshire-based herd manager, Chris Gowan, has been trialling the Uniform-Agri Ketosis Risk Alert software on his 750-head herd of pedigree Holsteins.

With more than 600 cows calving on a year-round basis, it can be tricky to keep a tab on 'at-risk' cows, but the tool has allowed all staff members to access herd information conveniently through an app on their phones. "We've been able to adopt a much more focused strategy when it comes to managing the transition period and ketosis prevention," Chris explains.

Since implementing the software as part of the farm's commitment to improve cow health and welfare, the herd has achieved some promising results, including:

- Cases of clinical ketosis falling into single digits
- Number of retained foetal membranes falling from 6% to 4.6%
- A minimised risk of disease despite an increase in milk yield

"The tool has been integral in supporting a smooth transition period, underpinning the cows' future lactations and reducing the prevalence of ketosis in our herd."



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Switching formula milk results in healthy calves at Holstein herd

The high-performing Vortex Holstein herd based near Dorchester is a perfect example of where a few small changes add up to make all the difference. British Dairying reports.

Rearing a lot of calves on one farm means that attention to detail, standard operating procedures and good communication between employees is essential. For Tom King, who keeps 750 Holstein cows in Dorset, and who rears all his own replacements, bringing together a lot of small changes has had a significant beneficial effect.

One of the changes which had the greatest impact was switching milk replacer – which was surprising, given it looked much the same on paper as the previous one. Amber Broadway from Bonanza Calf Nutrition, who has a BSc in Bio Veterinary Science, says there is good reason for this.

Check labels

“Labels are a legal requirement on calf milk replacer bags, and farmers and others need to be careful in using the label to assess feed type and quality,” she says. “Sometimes what appears to be the same, in fact is not.”

Protein, for example, is important for calf growth but is expensive to measure. When it comes to absorbable amino acids, which are important for calves, the source has an impact on eventual outcome.

“A plant-based protein may look the same on paper as a milk-based one, but when in a milk replacer it is not,” explains Amber. “Milk powders change with heat treatment as well, and this does not have to be disclosed. Skim milk powder dried for food tends to have been through



Amber Broadway says producers need to assess milk type and quality

a high heat process, so sourcing product from companies that dry their milk ingredients from raw fresh milk is more important than the percentage of skim milk powder. It is always a good idea to look beyond what the label states and ask those difficult questions.”

At Vortex Holsteins, Tom and his team have 660 high-performing cows in milk at any one time. They are milked three times a day, with the annual milk yield averaging 12,000 litres/cow at 4.3% fat and 3.4% protein. Milk is sold to Freshways on a liquid

milk contract. The cumulative result of a few small changes – including switching milk replacer – has seen calf mortality from birth to weaning fall to just 1.5%, in comparison to a national average of 6%.

Colostrum feed

Calves start life with a four-litre feed of colostrum within an hour of birth. All colostrum is tested and only colostrum which has a Brix reading of over 22% is used for the first feed. They then receive two litres of cow transition milk twice a day for two to three days, before transitioning to four litres a day of Shine Heifer Start at a concentration of 17%. They get this until they're seven days old.

By day 14, milk intake is at six litres a day – and they also get fresh water and an 18% crude protein dairy cake feed ad-lib from birth.

“Heifer Start contains key components found in transition milk and colostrum, which aids gut development,” says Amber. “Along with polyphenol technology, this helps inhibit the infectivity of cryptosporidium, coccidiosis, and pasteurilla, which can be useful in those first few days of life.”

The low heat skim and buttermilk formulation also coagulates for slow release, ensuring minimum digestive upset and maximum digestibility of milk proteins.

Kay Cox, who is in charge of calf rearing at the farm, is very impressed with the results, both in terms of calf performance as well as ease of use. “The milk cart is washed out and disinfected daily and teat feeders washed daily,” she says. “We have found that Shine Heifer Start mixes instantly and the calves seem to take to it immediately.”

Gradual weaning

Once calves are consuming approximately 1.5kg of concentrate a day, at around day 42, the weaning process is started. Calves are weaned slowly over two weeks, with the volume of milk gradually reduced daily.

A colour coding system, developed by Kay, uses tail tape on hutches and ensures that each calf gets its correct allocation of feed. The system uses two blue tapes to indicate that calves are less than a week old and therefore must be given two litres of milk twice a day. This regime means feeding is consistent, no matter which member of farm staff is on duty in the rearing shed. “I can't remember the last time we had to jab a calf for pneumonia, and scour rates are also very low; the calves really are thriving.”

Vortex Holsteins - calf feeding regime

Calf age	Quantity fed	Pen marking
Under 1 week	2 litres AM + PM	2 x blue tape
Between 1 and 2 weeks	2.5 litres AM + PM	1 x blue tape
Between 2 and 6 weeks	3 litres AM + PM	No pen marking
6 to 7 weeks (weaning age)	2 litres AM + PM	2 x yellow tape
7 to 8 weeks (weaning age)	1.5 litres AM + PM	1 x yellow tape
	Add electrolyte	Green tape
	Under treatment—check calf diary	Red tape

Vortex Holsteins uses a colour-coded feeding system for calves

Farm Facts:

- 648ha of owned and rented land, with wheat, grass and maize grown in rotation
- Cows are housed year-round with cubicles bedded on deep sand for comfort and hygiene
- Calf milk kitchen ensures milk is made up with water at 39°C
- Twice-daily cleaning means everything is thoroughly disinfected as well as cleaned with warm water to get rid of bacteria-hosting biofilm
- Mortality rate of just 1.5% in the 900 heifer and beef calves reared since April 2023.

Making the most of grazed grass at turnout

With many dairy farmers considering taking the opportunity to turn cows out, careful management and balanced rations will be key to maintaining yields and milk composition, as well as cow health.

Feeding cows at grass provides a welcome opportunity to reduce feed costs, but if milk production and cow health is to be maintained and improved, dietary change challenges must be overcome.

Key areas to address when spring grass is introduced to the diet include balancing energy and protein supply, maintaining optimal rumen pH (reducing risk of sub-acute ruminal acidosis SARA), and reducing risk of falls in butterfat production.

Buffer ration

"Too often the desire to exploit low-cost grass leads to over-estimates of its feed value and dry matter intake, leading to reduced performance, as well as poorer health and fertility," says KW Feeds nutritionist Charlotte Ward.

"A balanced buffer ration of suitable quality and quantity is critical to cow health and productivity, especially fresh calved cows and high yielders. This group of animals are unable to meet requirements for maintenance, plus milk, from grass alone.

"A base of good quality silage will be

key, with maize and/or wholecrop ideal as they contain the types of fibre lacking in spring grazing, alongside starch to help utilise the high levels of rumen protein in fresh grass" she adds.

"Including 0.5-1.0kg 'muzzle width' chopped straw helps provide the structural fibre needed for good rumen function."

These forages then need to be accompanied by carefully selected concentrate feeds to balance protein, digestible fibre and starch.

Protein content

As fresh grass can have a protein content of up to 27%, rations will be running at higher protein levels than usual. As such, any protein supplied in the buffer feed should be high quality, with a good level of digestible undegraded protein (DUP). If milk urea levels rise above 0.030/300 then action must be taken to avoid negative impacts on production, health and fertility.

"The British rapeseed expeller

"British rapeseed expeller NovaPro fits the bill, with its higher DUP:RDP ratio in comparison to soya..."

NovaPro fits the bill perfectly, with its higher DUP:RDP ratio in comparison to soya, allowing for improved protein utilisation," says Ms Ward.

Reduce risk of SARA

Feeding the live yeast **Vistacell** and buffer **Acid Buf** as part of the daily buffer feed, can help to manage highly digestible spring grass and reduce risk of SARA and

milk fat depression.

"By using **Vistacell**, the rumen is conditioned to promote growth of fibre digesting bacteria due to the yeasts natural ability to remove oxygen and helping to use up the excess lactic acid," says Ms Ward."

Acid Buf supports the cow's natural buffering capacity, maintaining the rumen pH above the critical threshold of 5.8 to reduce the risk of SARA," she adds.

Lactation profit

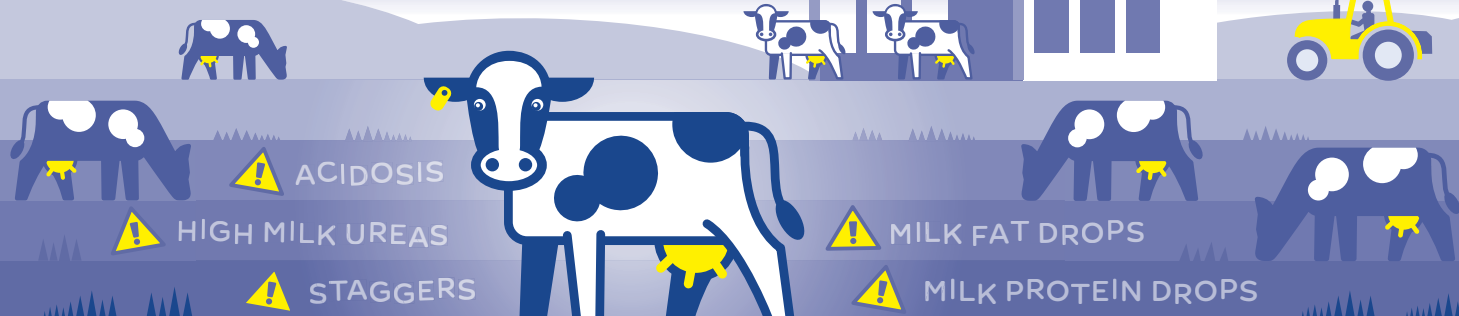
"With careful management and monitoring of grazed grass and supply of a high-quality, well-balanced buffer ration, producers can expect to maximise utilisation of grazed grass, limit any production losses, and improve overall lactation profit," concludes Ms Ward.

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Cheshire dairy solves milk fat puzzle

The grazing season used to come with mixed blessings for one Cheshire dairy farmer. Although cows at grass were a welcome sight, the dip in butterfat wasn't so good. British Dairying takes a look into the mystery and finds out what was going wrong.

Tom Bramall worked in the cattle breeding sector before returning home to farm in 1999, making him the second generation of the family on the tenanted Grosvenor Estate farm.

In the past two decades, after buying the neighbour's herd and renting more land, the herd at Well House Farm, Waverton, near Chester has increased from 80 cows to 250 cows plus followers. Tom now runs the herd on 182ha, which includes a 50-ha block for grazing and first cut silage. Maize is grown on 32ha and wholecrop cereals on 12ha, all of which are used in the winter total mixed ration (TMR) and summer buffer feed.

Tom's cows are bred for milk production alongside good body capacity to promote high forage intakes, and strong health and fertility traits. These support efficient milk production and improved cow longevity. Both are key drivers for Tom as he looks to improve the sustainability of his business, both environmentally – in part through reducing the carbon footprint of the unit – and economically.

Move to three-times-a-day

The current average yield for the all-year-round calving herd, which comprises a high and low yielding group, is 11,250 litres of milk at 4.2% fat and 3.3% protein. In November 2023, Tom moved from twice-a-day to three-times-a-day milking, which has boosted yields, maintained milk quality and reduced mastitis rates.



Tom Bramall runs his herd on 182ha



Cow are grazed on a paddock grazing platform, which is regularly reseeded with high-quality grass mixtures

This has suited the farm and the cows well. Milk is sold to the Co-op on a liquid contract.

“There are always cynics when it comes to trying something new.”

Despite his milk contract, Tom has never believed in driving for yield at the expense of milk quality. “I’ve always bred cows and managed the system to ensure that milk quality levels are at least maintained if not improved,” he says. “This keeps my options open in terms of milk buyers, and it also supports more efficient production.”

So, when butterfat tumbled in some years, between May and July, Tom was far from happy, and after

a period of head-scratching with his adviser and trying out a few ideas, he was pleased to come up with a nutritional solution.

Cows are grazed on a paddock system, which are reseeded regularly with a high-quality grass mixture, and the cows get a TMR buffer – similar to the winter ration – and a non-soya concentrate blend. The blend is topped up to yield in the parlour and fed at a rate of 0.33kg/litre.

Turnout mystery

“We thought we were on top of the nutrition, so witnessing a fall in butterfat of 0.6 percentage points in some years for no apparent reason was a mystery,” says Tom. “Butterfat could drop from 3.8%, which is the typical level in late April, to 3.2% in two days. It wasn’t immediately at turnout in early April, but from May to July when the grass was still young but growing very quickly.”

Despite being on a liquid contract, the drop in butterfat was so dramatic that in some years it triggered a milk payment penalty. “We tried various plans to try and mitigate this butterfat dip, including adding more forages, like straw, big bale silage and lucerne, and palm fat, but these did nothing to help,” adds Tom. “Extra forage only resulted in less grass intakes and a drop in yield. We still struggled with butterfat.”

“Within two days, butterfat started improving.”

So, when Tom saw an advertisement for a feed product three years ago which described exactly his situation and provided evidence on a specialised rumen

buffer which keeps butterfat on target, he gave it a go. "There are always cynics when it comes to trying something new, and I know the seasonal butterfat dip is typical – and accepted – in many herds. But I was keen to try and reverse the trend to avoid a hit on the milk cheque."

Quick response

He added Cargill's Equaliser Cream to the buffer feed at the rate of 150g/cow per day for high yielders. "Within two days butterfat started improving and within a week or 10 days it was back on target. The response was very quick," he notes.

"There are few products I would endorse in this way, but this is one that worked and held up the butterfat level through the grazing season. And it's reduced any risk of me facing a milk price knock in early summer."

This year, despite a particularly wet spring and a delay in turnout until well into April, he'll still be introducing the product in early May. "It makes sure the value of grazed grass is maximised and helps to protect the milk price. It's another cog in the sustainable milk production wheel."



Forage intakes, health, and fertility are core focuses

High oil and butterfat conflict

A dip in butterfat after turnout, during the second or third round of grazing, and often between three and nine weeks after initial turnout, can continue through early summer. This is caused by the high oil content and fibre in fresh grass.

This high oil content makes the unsaturated fat content of the grazing diet about 50% higher than a typical winter ration.

Also, fresh grass has low structural, highly digestible fibre which reduces rumen pH and produces acidic conditions. This disrupts the normal pathways used to produce milk fat.

Equaliser Cream is unique in its ability to reduce the negative impact on milk quality of high oil content diets found in grazed grass and where highly digestible, high energy silages are included in the ration.

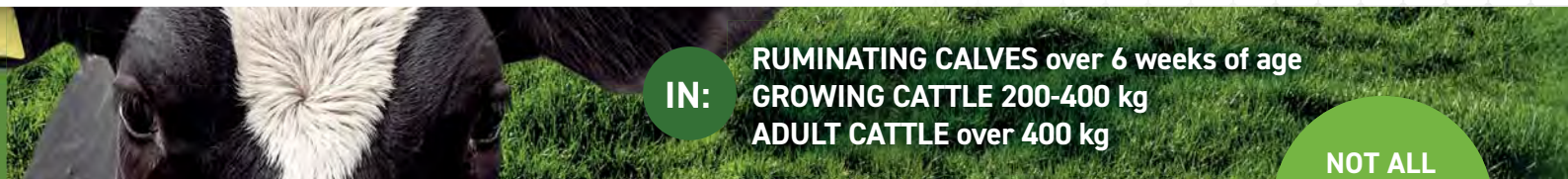
Its two-pronged mode of action attacks and prevents rather than 'cures' the problem. Whereas standard buffers control rumen pH, this product goes beyond this action by bringing a more consistent solution to treating butterfat problems by normalising the oil conversion pathways.

In trials on 25 farms in the UK and Ireland between 2021 and 2023, Equaliser Cream resulted in an average financial benefit of 51p/cow per day by maintaining or improving butterfat levels. For an average herd of 155 cows, this amounts to £2,412/month based on average milk prices for the farms at the time of the trial.



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Reaping the benefits of additives

Highly digestible grass silages are noted for not only providing high metabolisable energy values and for offering good quality nutrients, but also reducing carbon emissions, compared with more poorly-conserved forages. British Dairying reports.

Good silage management is about minimising, if not preventing dry matter losses, but that is easier said than done. “Take any 1,000t of harvested grass; you would be doing well to have 850t to feed due to visible and hidden losses,” says Agri-King’s Technical Manager, Neil Howie. “Top and shoulder losses are obvious, but within the body of the clamp there are hidden losses, due to respiration and inefficient fermentation.”

With silage priced at £120/t dry matter (DM), or £40/t fresh weight, then losses worth over £5,000 could easily be incurred in a 1,000t store. “However, these dry matter losses can be reduced by over 50%, by introducing a silage treatment additive, according to recent findings,” Neil explains. This research comprised 20 individual trials of various scale, each featuring chopped forage treated with Silo-King additive and a comparative control. Dry matter mass was measured both pre- and post-ensiling to determine its original content and loss. A wide range of dry matter losses were recorded, with the higher values generally observed in the larger scale trials. However, the research concluded that, regardless of scale or magnitude of dry matter loss, the effect of additive treatment was highly consistent. Silo-King reduced dry matter loss in the 20 trials by an average of 52% compared with the control forage, resulting in more tonnes of feed, more nutrients and reduced cost of production.

“Share farming has put a proper value on good forage.”

“Achieving rapid fermentation and efficient stabilisation within the clamp is the way to go in maximising grass silage’s overall feed value,” says Neil. “The length of fermentation will vary, according to crop type, moisture and maturity, but fermentation should be completed in as few days as possible post-harvest.” Silage



Good-quality forage and efficient grazing are priorities of the farm’s nutrition strategy, says Charlie Patten

production depends on microbial fermentation of plant carbohydrates to organic acids.

During clamping, and until the pH in the stored material drops below pH 4.5, respiration can carry on in the chopped forage. “During respiration, oxygen biochemically reacts with the plant sugars, producing carbon dioxide and water, together with heat,” Neil explains. “Dry matter and energy are lost and greenhouse gas is produced. However, the process can be arrested by removing the oxygen, most importantly by compacting and squeezing air out of the forage, and applying an authorised additive which acts as both an ‘oxygen scavenger’ and allows its beneficial bacteria to ferment the carbohydrates to lactic acid and consequently preserve the dry matter.”

Speed is of the essence. “It’s important that the bacteria in your silage additive quickly overwhelm the naturally-occurring bacteria and other spoilage organisms residing on the plant,” he notes. “To achieve this, three lactic acid-producing bacteria in the inoculant act in relay, the first thriving at the natural field pH

and ‘passing on the baton’ to the other two, resulting in a ‘flash fermentation’ and subsequently stabilising the forage in just a few days after harvest.”

Energy and dry matter losses

Poor compaction, slow clamp filling and poor sealing allow spoilage organisms to proliferate. “Diverse fermentation pathways by

undesirable micro-organisms can produce unwanted metabolites, like butyric acid, ethanol and carbon dioxide, which all contribute to energy and dry matter losses,” says Neil. However, potassium sorbate reduces both yeast and mould spore counts, while enzymes which ‘pre-digest’ fibre and improve cell wall digestibility make the silage nutrients more available to livestock.

Case study

Gillian Patten and her sons, William and Charles, milk 360 cows at Church Minshull, Cheshire. They have farmed at Baddington near Nantwich for many years, milking an award-winning pedigree Jersey herd since 2013. In 2021 the decision to expand led them to enter a share farming agreement with Peter Lakin at Lea Green Hall.

Forage plays a big part in their operation, and making good-quality multi-cut grass and maize silage, along with efficient grazing, are the cornerstones of their nutritional strategy.

Charles relishes the challenge of getting the most out of homegrown feeds, and his silage-making policy includes using Silo-King to preserve as many tonnes of feed as possible. “Share farming has helped us put a proper value on good forage,” he says. “We know exactly how much it costs to produce and how much it is worth to our business. Keeping more tonnes of forage in the clamp means that we do not have to buy in as much feed.

“We won our local silage competition this year for both grass and maize silage, with the latter analysing 35.5% DM, 37% starch, 12.5MJ/kg of metabolisable energy (ME), and 99% starch digestibility.”

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Preventing bloat when cows are left to graze clover-rich swards

White clover can help reduce artificial nitrogen use by fixing up to 100kg/ha of nitrogen annually. However, cows that gorge on clover are at risk of bloating, so clover leys must be managed carefully. British Dairying shares ways to prevent such an issue.

Bloat can occur when cows consume swards with high levels of clover, which causes the rapid breakdown of protein inside the rumen.

“Ruminant animals produce large volumes of gas during digestion, which is usually belched or passes through the gastrointestinal tract,” explains Dr Michael Egan at Teagasc. “Clover increases the rate of breakdown in the rumen, so the build-up of gas is greater and exceeds the animal’s ability to expel the gas, causing bloat.” The ballooning rumen places pressure on the diaphragm, heart, and lungs, which can cause sudden death if not treated.

In mild cases, bloat oil can be dosed to the animal as a treatment.

However, in more severe cases, veterinary assistance may be required. “The most common sign of bloat is a distended left abdomen, but affected animals will also show signs of discomfort, including respiratory distress,” says Dr Mary McEvoy at Germinal Technical Direct (Ireland). “When a cow gets bloat, she is more susceptible to suffering from it again within the next two to three months – there is a 60% chance of it reoccurring,” she explains. “This is because the rumen muscles stretch, and they are not able to expel gases as efficiently.”



Gorging on clover increases susceptibility of cattle to suffer from bloat

Typically, a sward with a high clover content of more than 40% represents a high risk for animals. “However, incidences of bloat may also occur when the clover content is lower than this,” notes Michael.

There are other factors that can lead to bloat, including:

- Having hungry animals prior to allocating grass/clover swards – this induces gorging.
- Animals which have not had access to grass/clover swards previously.
- A wet morning with heavy dew on the pasture; this makes the grass highly digestible.
- Very lush grass with low pre-grazing herbage mass (<1,400kg/ha of dry matter) because fibre from grass is reduced.
- Re-seeded swards containing high clover rates.

Thankfully, there are ways of reducing risk of bloat. “One way is by using bloat oil,” says Mary. “Adding bloat oil to drinking water can help reduce the risk.”

It should be introduced 24 hours before stock move to the risk paddock. But in periods of wet weather, animals may drink less water from the trough, so this may not eliminate the risk. Another way is to manage grazing specifically to prevent bloat.

“Use ‘breakfast breaks’ to remove the risk of cows gorging on clover,”

says Michael. “This involves using a strip wire for two or three hours after cows are turned into a fresh paddock. This prevents cows from preferentially selecting clover over grass, thus reducing the risk. After two to three hours, animals can be given access to the whole paddock.”

When grazing it is worth following these guidelines:

- All animals should be turned out to the paddock at the same time to prevent the first cows milked from gorging on clover before the other cows arrive in the paddock.
- If clover content is particularly high (>40%), consider feeding a source of fibre at milking. For example, 2-3kg/head of grass silage.
- Avoid grazing too tight (<4cm) so that cows are not hungry when moving to the next paddock. This will prevent gorging.
- Closely monitor cows when they are grazing high-risk paddocks. The first two to three hours after turnout pose the greatest threat.

Mary offers a note of caution to dairy farmers following these guidelines.

“Although all the above will reduce bloat, even with preventative measures in place, there still may be a risk, so farmers must remain vigilant.”



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Culture of change for the better

In the latest VetPartners farm vet comment, Cormac White, a vet at Farm Vets South West, shares his thoughts on the part labour efficiencies play in achieving sustainability within agriculture and the importance of exploring different work cultures.

From the sustainable farming incentive to milk buyer initiatives and consumer pressure, the term 'sustainability' seems to be everywhere.

Most of these initiatives are focused on carbon, water quality and biodiversity, which are all incredibly important issues. But business sustainability is just as important as environmental sustainability.

Beyond a rural labour force

In my recent travels to Cyprus and Brazil, the common theme affecting the sustainability of agricultural and veterinary industries was labour, as has been apparent in the UK in the past few years.

So, how do we address a problem as large, complicated, and challenging as labour? A quick cold fact is worthy of mention: 84% of the UK population

are urban dwellers; so relying solely on employing people from a rural background depletes the available labour force substantially.

Having come into the industry from a city background, I'd hope that veterinary medicine is not the only significant entry route to agriculture for urban people. There's already great work going on to encourage diverse talent into the sector, but it's more important than ever to keep up this momentum.

Lean management

The working culture is also imperative and, by listening to the innumerable podcasts available for vets who spend too much time in a car, I've become engrossed with the concept of 'lean management'.

It is easy to consider this concept as improving efficiencies and

cutting waste, but what has caught my eye from other countries is the organisational value built into this management style, in particular the concept of 'Kaizen'.

Kaizen refers to a culture of 'change for the better' or 'continual improvement'. Simply put, this means leaving everything better than you found it, from tidying the medicines cupboard when a bottle gets returned, to topping up the teat dips when milking is finished so they're ready for the next milking.

Instilling this value into your team would take time, requiring leadership by example and communication. But companies that have instilled this have noted that it generated a greater sense of respect among colleagues, as each felt invested in ensuring they weren't the person who let the side down. Clearly this concept is

challenging to implement, and the common refrain is that farms aren't car factories.

But surely application of these values could help drive efficiency, by reducing lost time looking for equipment, last-minute ordering, and the necessity to clean equipment before use.

Small changes, big difference

Additionally, it can help develop a sense of responsibility and camaraderie within a team. It's given me food for thought and I'm giving it a whirl in the practice and at home as well, in the hope it makes the weekly house clean, truck sort-out, etc, seem less of an undertaking.

Minor changes could help solve the big problems we face as an industry and, if not, at least I'll spend less of my Friday sorting my truck.



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Improve cow comfort and hoof health to reduce herd lameness

Cow lameness is a multi-faceted issue within the dairy industry, encompassing factors including genetics, nutrition, management practices, and environmental conditions. British Dairying reports on some of the proactive and cost-effective options available.

Lameness in cows often stems from hoof injuries and structural abnormalities, leading to discomfort, pain, and compromised movement.

“One precursor to lameness is the increased incidence of concussion, defined as the repetitive impact and pressure exerted on the hooves and limbs during walking and standing,” says Chas Butler, Sales Manager at Intershape.

Environment

“When considered in combination with the 90-90-90 rule, which relates to 90% of lameness starting in the hoof, 90% in the rear legs and 90% of that in the weight-bearing outer claw, this sharply demonstrates how important hoof health is.”

Improving the environment to support hoof health is vital. But what does that mean in practice? “Taking a moment to review housing, standing areas and walkways, by literally walking where your herd does, is a good start,” suggests Chas. “By assessing cubicles, collecting yards, walkways, and parlours, there may be areas that can be covered with highly durable yet soft surfaces to

reduce leg and foot concussion in your herd.” Although high-quality rubber matting can reduce subclinical damage in the hoof, it is unlikely to prevent acute lameness entirely, notes Chas.

“Yet the benefits of a durable but soft and elastic floor, and mattresses in cubicles, shouldn’t be underestimated – think how often cows are in and out of the parlour, standing in collecting yards and lying in cubicles, particularly in the winter.”

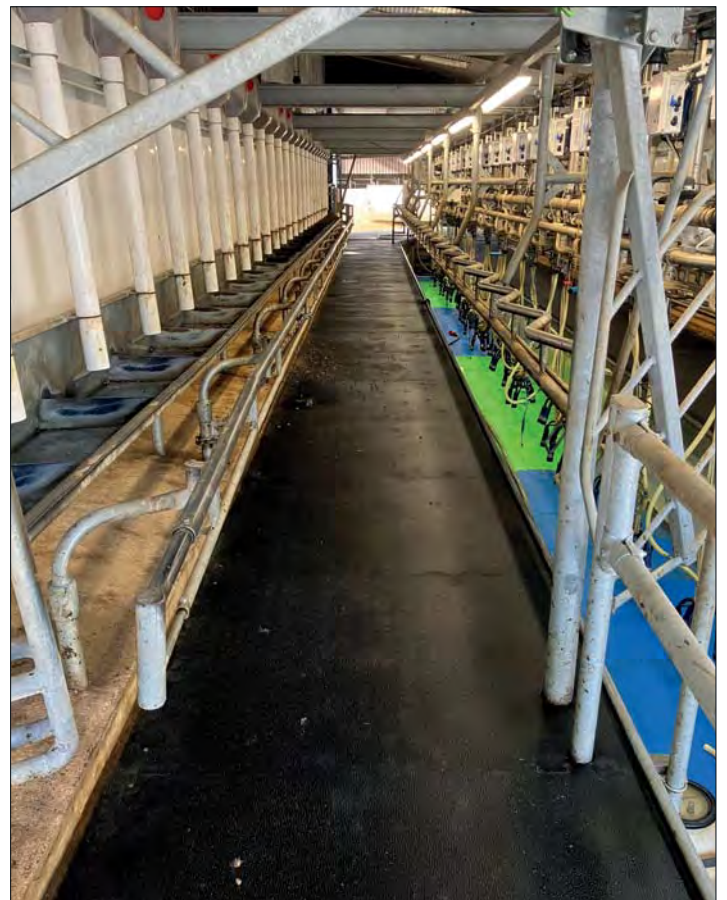
The flooring surface in milking parlours plays a pivotal role in mitigating or exacerbating lameness-related issues. “Traditional concrete flooring, while durable and easy to clean, lacks adequate shock absorption properties, subjecting cows to heightened levels of concussion,” Chas believes.

“Enhanced cow comfort and welfare translate into improved milk production.”

“In contrast, installing matting systems offers a proactive and cost-effective solution by providing a cushioned and supportive surface that increases comfort – and increased comfort means increased milk supply.”

The inherent flexibility of these surfaces conforms to the contours of the cow’s hooves, distributing pressure evenly and reducing localised stress points. “The integration of mattresses and matting in housing and parlours not only addresses the immediate concern of concussion mitigation, but also yields long-term benefits for both cows and the farm business,” notes Chas.

“Enhanced cow comfort and welfare translate into improved milk production, reproductive



High-quality rubber matting can reduce subclinical damage in the hoof

performance, and overall herd health. Moreover, the proactive approach to lameness management underscores the commitment of producers to uphold animal welfare standards and sustainable farming practices.”

Case Study

Geoff Homer has a dairy and arable enterprise on 1,200ha near Marlborough, Wiltshire. He milks 900 cows in three herds producing 5m litres annually, block calving in the autumn and spring. The herds were historically Holstein, but the team have transitioned to Friesian crossbreeds, with a focus on British, Irish and New Zealand genetics suited to the pasture-based system.

Cows are fed on a pasture-based diet year-round, and turned out

whenever possible. Typically, they have an average of 285 days at grass a year, and are paddock grazed on mainly herbal leys, with the team measuring growth twice a week to optimise both grass growth and nutrition.

The recent wet autumn and winter has been a challenge, and over winter the cows are bedded indoors on chopped straw with cubicle housing, eating grass and maize silage.

All three farms have a standardised operating procedure, protocols, and kit to keep management as straightforward as possible, each using 24x48 Waikato swing-over parlours, with automatic cluster removal and cluster flushes.

“We’ve been heavily investing in infrastructure improvements over



Geoff Homer farms in Wiltshire

the past decade, looking at specific problems or bottlenecks, no matter how small, to increase cow comfort," explains Geoff. "When we do, we find efficiency increases, and our team tend to be happier in their work, too."

Ellis Blades, Herd Manager at one of the three Homer dairies; the 310-head Spicey Dairy at Waglands Farm, notes that cow flow through the parlour could be improved.

"The marginal gain of 2% on mobility tests all adds up to an overall win in productivity."

"Last year, we often had to push a few cows from each line in, which added time and effort to milking," he says.

Geoff and Ellis assessed the collecting yard, parlour and exit and concluded the rough concrete surface was the issue. "We had a choice of re-laying the concrete, or looking at covering the existing concrete with

matting," says Ellis.

"Homer Farming is all about cow comfort and improving welfare, and both Geoff and I believed the cows weren't flowing as they weren't comfortable on their feet across the rough concrete.

Matting choice

Rather than lay a smoother and potentially slippery surface, we chose to invest in Animat from Intershape, as it is supportive and shock absorbing, as well as giving excellent traction when wet. I could also use the scraper on it without an issue."

Nearly a year since the mats were fitted in the final third of the collecting yard, throughout the parlour and around four metres through the exit, cow comfort has improved significantly. "The matting is definitely kinder on the cow's feet," says Ellis. "Flow through the parlour is notably better and I'm not having to push any cow other than the last line in.

"I'm probably saving half an hour and sometimes 40 minutes per milking because of it. It makes my job easier, which makes me cheerier, too. An increase in cow comfort almost always means staff are happier."



Chas Butler has worked with Geoff to help improve cow comfort and flow

Lameness has never been a particular issue in the Spicey Dairy herd, with an average mobility score of 95%.

In the most recent mobility test, however, since the matting has been fitted, the herd mobility has improved to 97% – the best score the team has ever had. "Since switching to matting over concrete, we've found that feet are less brittle, and

they are harder," says Geoff. With a net zero goal by 2040 and an equal emphasis on looking after its team of people, Homer Farming knows that stacking marginal gains is the way to achieve success.

"Our cows are happier, as shown by the increased cow flow. The marginal gain of 2% on mobility tests all adds up to an overall win in productivity."



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AHDB education pilots empower farmers, teachers and students

by

Roz Reynolds,

Head of Strategic Operations and Education

AHDB's education team has been working with industry partners and stakeholders on projects supporting farmers, and empowering students and teachers.

To support experiential learning opportunities for school children, AHDB, in partnership with LEAF Education, is running a pilot project to give twenty farmers the skills and knowledge to host safe and impactful school farm visits, including the CEVAS (Countryside Educational Visits Accreditation Scheme) training. We have also run three CEVAS Alumni events to enable experienced host farmers to share best practice and ideas.

AHDB is collaborating with the British Nutrition Foundation on an innovative pilot programme providing free ingredients to schools. Designed to address cost as a barrier, the initiative empowers students in Years 8 & 9 to develop practical cookery skills and explore diverse ingredients like dairy products, pork and beef. The Dairy & Flour Fortnight saw over 1,000 students across England participate in making their own butter and crumpets.

Recently AHDB and the British Nutrition Foundation collaborated with Harper Adams University to deliver a successful "Food – a fact of life" (foodafactoflife.org.uk) interactive conference aimed at teachers. The event provided teachers with a hands-on learning experience to enhance their classroom delivery of food production and nutrition topics.

Sixty-five teachers from across the UK participated in the conference. The programme included workshops, a farm tour showcasing the university's dairy unit with robotic milking technology, and interactive sessions on ice cream and bread production, along with sensory evaluation of food products.

The teachers really enjoyed learning from industry experts and seeing sustainable farming practices firsthand. We received positive feedback which confirmed the value of the conference, with participants gaining new insights and practical skills to integrate into their teaching.

AHDB is dedicated to inspiring the next generation about food production and the role of British farming.



Hybrid flooring helps address lameness

A dairy farm in Nottinghamshire is reaping the benefits of a modern flooring solution to lameness using new grants available. British Dairy finds out more.

Lameness is one of the biggest issues dairy farmers face, and fresh grants mean now is the ideal time to address the issue with better flooring.

"Lameness affects milk production, reproductive efficiency, and animal welfare, and herd health issues can be expensive," says Richard Moody, Managing Director at Wolfenden Concrete. Indeed, the AHDB estimates that 25% of dairy cows experience lameness, and the cost of this – when taking vet bills, yield loss, and shorter productive lifespans into account – is approximately £180/cow, or £15,000 for an average-sized herd.

The AHDB identifies three main causes of lameness: poor-quality flooring, cows standing too long on hard surfaces, and badly-designed cubicles. Fortunately, dairy farmers have options to manage these problems.

Funding

"Since last summer, the dairy industry and the government have shown a clear, renewed demand to address the issue of lameness," Richard notes.

This is covered by the Farming Equipment & Technology Fund (FETF) 2024, with several rounds of funding anticipated this year. It is backed by a UK dairy industry welfare strategy, with six welfare themes: Thriving cows; healthy feet; comfortable cows; appropriately nourished cows; healthy udders, and positive welfare. Within the 'healthy feet' strand, farmers are encouraged to develop a proactive lameness management plan, and so the FETF 2024 grant funding is timely, especially in its revised form. One area where hoof health can be improved with grant funding is through the item FETF234A, rubber coverings for slatted floors in cattle buildings.

To fit the scheme it must be "a rubber floor covering designed to increase comfort for cattle housed on slats" having "slat holes cut to make sure drainage capacity is maintained". This is where Wolfenden has made significant investment, developing a new Hybrid Supa slat for dairy housing. One farm in Nottinghamshire is already reaping



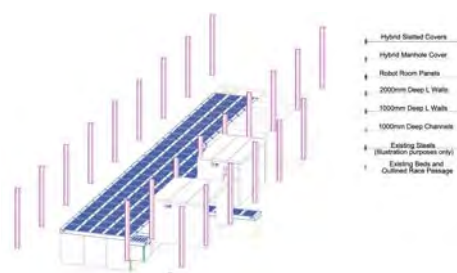
Government grant funding for flooring is timely

the benefits from improved flooring. When brothers Andrew and Richard Pidcock-Matkin were looking to invest in the dairy housing at their family farm, they wanted to adapt an existing building so that it would be compatible with a new robotic milking regime, as well as extending their slurry stores. "We needed additional slurry storage, and decided to invest in robotics to help make milking easier and less labour intensive," says Andrew. "Like many farmers, we know the issues with recruiting skilled labour, so we wanted to make our milking as efficient as possible. We already have slats in other sheds on the farm, and have been really happy with the way they work, keeping the floors clean, so we were keen to go back to Wolfenden for this new project."

Good slurry management

Having slurry storage underneath the cattle housing can save on the cost of multiple schedules of work, especially for farms considering increased mechanisation for better productivity. In addition to helping reduce on-farm emissions, good slurry management plays an important part in hoof health, with the link between pooled slurry and increased lameness being well-documented.

For the Pidcock-Matkin farm, Wolfenden incorporated its L wall units into the design, specified at two different depths, 1,000mm



A design considering drainage and cow comfort

and 2,000mm, creating two tanks alongside each other, which separate parlour washings from the slurry and are serviced by the firm's Supa Deep Channels. These new tanks match the depth of an existing tank at the opposite end of the building, so help to maximise the benefits of a refurbishment and avoid unnecessary work and costs.

"This can only be a win-win for farmers."

Defra's Code of Good Agricultural Practice advises reducing the exposed surface area of waste and air movement over it, so the depth of slurry channels plays an important role in helping to reduce emissions. A deeper channel keeps a greater distance between the slurry and the slat. Where a deep, narrow channel is specified, the surface area of exposed slurry is reduced, and smooth internal walls can help to move slurry over greater distances more efficiently. The Pidcock-Matkins

also installed new hybrid slatted covers and hybrid manhole covers. "These new hybrid slats include a high number of drainage holes in the rubber cassettes, to ensure the rapid dispersal of solids and liquids, keeping floors cleaner and drier," explains Richard Moody. "The cassettes are easily interchangeable, to help future-proof the flooring, with a minimum 10-year design life, but can be changed as new innovations are developed without the need to change the slats themselves."

Richard Pidcock-Matkin agrees: "Crucially for hoof health and to protect against lameness, the hybrid slats offer the optimum combination of rubber and concrete, with a non-slip, textured surface applied to the concrete areas, providing exceptional comfort and grip to allow for more natural and confident cow movement and behaviour."

The brothers have been closely observing the impact of the new environment on the herd, and the cows are settling well into their new robotic milking routine, with heifer yields already showing improvement. They are particularly pleased with the impact of the Hybrid Supa slats. "The



Quick dispersal of urine and manure is important for hoof health

rubber inserts in the slats are better for the cows' feet," notes Andrew.

"They don't slip. With this better grip, cows are happy to stand on the flooring and it seems to have helped them get used to the new robotic milking system. It gives them more confidence." Whether upgrading

existing facilities or building new ones, hybrid flooring can help reduce emissions while also addressing the critical issue of lameness, believes Richard Moody.

"Where these are specified, and potentially grant-funded, this can only be a win-win for farmers."

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Producers urged to optimise nutrition to prevent lameness

There's an identified link between nutrition and lameness - some practical approaches are helping dairy farmers to improve herd hoof health. British Dairying finds out more.

Lameness in dairy cattle remains a critical concern, affecting both the welfare of the animals and their production capabilities.

In England and Wales, prevalence rates hover around 36.8%, and lameness ranks among the top three challenges in dairy cow health. Sitting behind mastitis and reproduction issues, it is the third most expensive disease to treat.

Beyond the direct costs of treatment and veterinary care, it also has a knock-on effect on milk production and calving intervals. "We don't often connect these additional expenses, with cows ending up on a cull list, as actually originating from a lameness issue," says Scott Carter, Southern



Nutrition, as one of the basic preventative factors, plays a critical role in promoting healthy hoof growth

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Studies indicate that lameness costs range from £110 to £400/case. Alarmingly, the Burger study suggests that a significant portion of production disease costs – up to 27% – can be attributed to lameness issues alone.

The question of how nutrition influences lameness is something that Scott hears a lot from dairy farmers seeking to optimise production. “Working collaboratively with the whole farm team, we recognise the critical role nutrition plays in promoting healthy hoof growth,” he says.

“It is one of the basic preventative factors affecting the quality and growth of hoof horn, and associated hoof disease. The key word here is preventative... it’s essential to recognise that nutrition is just one piece of the puzzle.

“Although physical factors like environment and trimming routines are more commonly associated with lameness, we can’t overlook nutrition. A well-balanced diet, rich in essential nutrients, is fundamental to fostering robust hoof health.”

Balanced approach required

There are key nutritional elements to consider. “Minerals, vitamins, amino acids, and fatty acids all contribute to the structural integrity of hooves,” says Scott. “Most of these play key roles in the keratinisation process, which ensures healthy horn growth.”

Nutrients which are necessary for keratin production include amino acids, fatty acids, minerals (especially calcium), and trace elements and vitamins. Imbalances in minerals and vitamins, as well as other nutritional deficiencies, can lead to fragile horn growth, which may be more prone to cracks and infections.

“What we are essentially trying to achieve when looking at this part of a cow’s diet is to secure healthy horn growth, to create a hoof that is better able to manage with the physical challenges facing a modern dairy animal, in both grazing and housed systems,” explains Scott.

Other core elements of the diet include fibre and rumen balance, as well as a balanced approach to feeding concentrates. Concentrates containing high starch, (cereal, ground maize, etc), as well as sugar sources like molasses, create an acidic rumen environment when fermented by rumen microbes.

Acids in the rumen can damage the gastrointestinal lining and create localised or systemic inflammation,



Scott urges a collaborative approach

which can travel outside of the rumen. Diet changes and lower rumen pH can also cause a shift in rumen microbial populations, which may favour species like *Treponema*, which play a role in digital dermatitis.

“By carefully formulating the diet and monitoring cow health, we can limit the occurrence of hoof health issues caused by nutritional imbalance and mismanagement,” he claims.

“Avoiding clinical or sub-acute rumen acidosis is important for the same reasons. The situations that upset rumen health and most commonly lower rumen pH have a negative effect on foot health.”

Awareness of toxins

Another consideration is toxins. Most commonly, but not exclusively, found in mouldy feed, toxins challenge the rumen. When sources of toxins are fed, histamine and other endotoxins are released into the blood, which can cause vasodilation, ultimately damaging the network of blood vessels in the hoof dermis, says Scott. “Subsequently, there is an insufficient supply of oxygen and amino acids, which are necessary for the formation of the hoof tissues; a precursor or gateway to many more problems including laminitis.

“So, we have plenty to think about when it comes to taking a balanced and proactive approach to feeding cows to prevent lameness. But we also know that lameness affects how diets perform, including lower dry matter intakes, energy drain to deal with pain, and subtle changes in cow behaviour – which is particularly relevant on farms with automated milking systems,” Scott explains.

“So, it works both ways: nutrition can have a positive effect on lameness, but lameness that is already present has a huge, detrimental effect on the outcome of a cow’s diet.”



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Feed to reduce acidosis and lameness

High energy maize is growing in popularity across the UK as dairy farmers look to make optimum use of home-grown feeds. So understanding how to get the most out of this valuable resource is increasingly important. British Dairying discovers more.

Significant improvements in both digestibility and reliability of energy content mean milk producers must pay more attention to what they feed their maize silage with. That's if they are to avoid complications with potential acidosis and laminitis, says Grainseed's Neil Groom.

"Plant genetics and knowledge have improved significantly in recent years, with many growers now able to produce consistent, high-quality crops. When included in a total mixed ration (TMR), this can really boost milk production and quality.

"In particular, the wider use of earlier varieties able to finish fully, even in more marginal areas of the country, have meant most maize growers can achieve starch levels of more than 30%, with a corresponding rise in metabolisable energy (ME) to over 11.0MJ/kg dry matter (DM)," he notes.

"Although this is great news for producers looking to get more from homegrown resources, it does mean they have to understand the effects of such high-energy maize on the rumen and take steps to avoid any potential issues," explains Neil. Avoiding these begins well before feeding. It starts with choosing a maize variety that will definitely finish in a particular location and is well-suited to the system in which it is to be used.

"Producers shouldn't be afraid of producing high-energy maize. Energy drives both yield and solids, so choose a variety that's going to give you maximum starch yields with the heat units you have available,"



Neil Groom rates high-energy maize



Producers must monitor changes in their forage through the feeding period

he suggests. "D Value is an increasingly important consideration, with varieties like Bonnie able to combine an ME of 11.9MJ/kg DM ME with a cell wall digestibility of over 60%. That's providing a lot of very accessible energy which has to be factored into ration planning.

"Acidosis, the precursor to lameness-inducing laminitis, occurs when dairy cows digest too much energy too quickly. So the first question to ask is whether other constituents in the ration, like compound feeds or wholecrop, can be reduced."

"Producers shouldn't be afraid of producing high-energy maize."

Dairy farmers should also be prepared to use chopped straw or rumen buffers to moderate rumen pH, where appropriate, says Neil. "Rations need to be balanced at all times, and you need to get into the habit of testing all your forages at least once a month, as feed values do change as the winter progresses.

"Acids produced in the fermentation process continue to soften the maize grain in the clamp, making more starch available as time goes on, which is why maize always feeds better after Christmas than before."

Hampshire-based independent feed adviser, Martin Attwell, agrees: "Dairy farmers can feed high levels of maize without complications provided some simple rules are followed," he says. "Producers must monitor changes in their forage through the feeding period and adjust rations accordingly, to account for the extra starch availability to the rumen and small intestine as material matures in the clamp."

If different varieties have been clamped separately, making sure an analysis is done before feeding, and allowing 10 days change over from old to new season maize is also important, suggests Martin.

"Fresh cows are particularly at risk as we tend to feed them a high-energy diet, in terms of both starch and sugar content, to ensure they don't dip into a negative energy balance.

"Rumen pH can quickly drop to 5.5 or less in such circumstances and this can not only decrease the rumen bug population, but in turn reduces digestion rates and thus decreases dry matter intake," he notes. "Even before laminitis becomes an issue, acidosis and sub-clinical acidosis lead to inefficient rumen function, reduced butterfat, loose dung, and poor utilisation of diet."

Ration structure critical

The overall structure of the ration is of critical importance when looking at how to minimise the threat of acidosis, he points out. "With the increase in grass silage in rations from multi-cut systems and the tendency to

chop maize shorter, we are inevitably heading towards reduced structural fibre levels in high-producing cow diets, with an increase in rumen flow-rates resulting.

"When assessing a TMR, it is therefore important to look at balancing the structural fibre contained within it and the proportion of neutral detergent fibre (NDF). This should ideally be 34% or over," says Martin. "Aiming to slow the passage of rations with poor structure through the rumen by adding fibre from chopped haylage, good-quality straw or similar, can be very beneficial." A tendency for over-mixing TMRs can also be to blame for poor ration structure, which can be caused by incorrect equipment settings or simply by mixing for too long, he says.

Monitor to manage

"It's all too easy for operators to be distracted by a mobile phone, for example, and leave the mixer running beyond the optimum time, which can lead to accidental over-processing. This can result in insufficient fibre length, which in turn reduces cud-ding rates and lack of saliva production, and leads to insufficient natural buffering of the rumen.

"Regular analysis of all feed materials, including maize, is essential to ascertain the starch content and degradability, and this will be invaluable in helping feed advisers make the best decisions regarding ration formulation," notes Martin. "Plus, it's always worthwhile having free-choice rock salt available for cows, as this increases natural rumen buffering. Feeding sodagrain along with maize is also a good idea, as this degrades slowly in the rumen and is alkaline in nature."



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References: 1. Diaz-Reval M.J. *et al.* 2004. Evidence for a central mechanism of action of S-(+)-ketoprofen. *European J. Pharmacology*. 483: 241-248. • 2. Netter P *et al.* 1985. Diffusion of intramuscular ketoprofen into the cerebrospinal fluid. *European J. Clinical Pharmacology*. 26: 319-321. • 3. Whay H.R., Webster A.J.F., Waterman-Patterson A.E. 2005. Role of ketoprofen in the modulation of hyperalgesia associated with lameness in dairy cattle. *Vet. Record*. 157: 729-733. • 4. Kasiora K., Anagnostopoulos A., Bedford C., Menka T., Barden M., Griffiths B.E. *et al.* Evaluation of the use of ketoprofen for the treatment of digital dermatitis in dairy cattle: A randomised, positive controlled, clinical trial. *Vet Rec.* 2021:e977. <https://doi.org/10.1002/vetr.977>

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Identify the link between good herd health and milk from forage

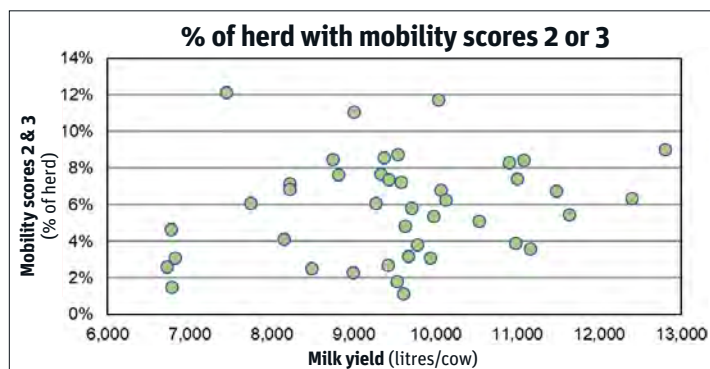
Improving soil health promotes healthy grass and forage, and in turn healthy livestock, within the complex biological cycle which is dairy farming, as British Dairying discovers.

Milk from forage and good herd health are not associated together often enough, according to Kathryn Rowland at Kingshay Consulting. “Many herds focus on improving conserved forage quality and grazing, rather than considering the range of other things that can affect feed efficiency. But milk processors, like First Milk, are looking at milk from forage as a key performance indicator linked to improving carbon footprints and to savings in feed costs.”

For herds in the 8,000 to 9,000-litre yield band on Kingshay's Dairy Costings service, there is a wide range of purchased feed costs between the highest and lowest 25% of herds, ranked by milk from forage (see table). The 4.25ppl difference (data for the period ending December 2023) can equate to £72,283 for a typical 200-cow herd.

Looking at potential milk from forage targets for all herds (apart from the highest yielding herds – yielding over 10,000 litres/cow) an average milk from forage target of 3,000 litres/cow is a good guide, notes Kathryn. This will depend on stocking rates though; herds with a higher stocking rate would need to lower their expectation of milk from forage per cow. The top 25% of herds are achieving over 4,000 litres/cow from forage, with the top 10% reaching over 4,500 litres.

“There is no silver bullet that can make instant or quick improvements. It all starts with soil. Soils that are in optimal physical, chemical, and biological condition will produce



Between 1.6% and 12.1% of the herd have a mobility score of two or three

nutritionally richer forages – healthy soils and healthy livestock lead in turn to healthy profits,” she explains.

“It is important to evaluate the performance of each cow – her financial income, cost, and how much of your time she is consuming. Sometimes cows are kept longer than economically viable in the herd to keep cow numbers up or due to TB restrictions. Therefore, problem cows may hog a cow place that could be offered to a more efficient cow or heifer.”

Particularly with the use of sexed semen, there are more heifers being reared that are genetically more efficient than their dams. “However this should not be an excuse for a higher replacement rate,” says Kathryn. “Longer term, the aim should be for healthy cows and a relatively low level of herd turnover.”

For herds recording with Kingshay's Health Manager service, lameness cases averaged 33 cases per 100 cows (data to year end March

2023), falling from 40 cases per 100 cows five years ago. “Lameness can be a grey area when it comes to recording, due to over or under recording cases, particularly if using results from routine foot trimming records,” says Kathryn. “Therefore, frequent mobility scoring is an important way to assess herd lameness.”

Assess and review

Where mobility and body condition scoring are a requirement of milk contracts, it is key to utilise that information, rather than just treating it as a tick-box exercise and acting on it only if there is a problem.

There is a wide range among herds, with between 1.6% and 12.1% of the herd having a mobility score of two or three (see graph). There are no set targets for what a typical herd should be aiming for. But automatic 3D imaging systems can help with monitoring mobility scores and body condition scores, identifying changes before cows go over or under target. Producers also need to consider culling for lameness when assessing their herd. Kingshay's Dairy Costing Focus Report 2023 showed 6.7% of cows leaving the herd were due to lameness-related reasons. “It is worth reviewing your herd's lameness regularly with your vet and critically assessing your housing and yard infrastructure, cow tracks, foot trimming protocols and foot-bathing procedures,” suggests Kathryn.

Kingshay's Health Manager service illustrates how average vet

and medicine costs have risen from £73/cow (0.9ppl) in 2020 to £91/cow (1.1ppl) in 2023. Over this time herd size has also increased and average yields have risen to 8,458 litres/cow – but trends in mastitis and lameness have also seen reductions during this period.

So when analysing veterinary and medicine costs:

- Be aware of vet costs in terms of both ppl and £ per cow
- Compare your vet costs with herds of a similar type
- Look at the vet bill and replacement cost of cows together
- Break the vet bill down into ‘preventative’ and ‘treatments’
- Proportion costs to significant diseases. How much do you spend on mastitis, lameness and fertility, etc, and how do you control these issues? If you spend lots on mastitis but still have lots of cases and a high cell count, there is a problem to address. Sort out this problem and the vet bill will fall, production will improve and the enterprise will benefit.

“Vets want to be involved with keeping cows healthy and they have an interest in ensuring that their bills are an investment rather than a draw on dairy herd performance,” says Kathryn. “As financial and time pressures have grown, there has been less opportunity to develop these areas of veterinary management input. Management of dairy cows to reduce loss of production and premature culling due to disease will far outweigh the impact of reducing the time of a good vet on farm or sourcing medicines with a few percent extra discount.”

Milk from forage calculation:

A calculation based on the energy required to produce a litre of milk (butterfat and protein adjusted) less the energy from any purchased feeds (e.g. concentrates, liquids and supplements), with the remaining milk energy supplied from any forages fed, both conserved and grazed.

Milk yield band - 8,000 to 9,000-litre herds

	Highest 25% milk from forage	Lowest 25% milk from forage
Yield per cow (litres)	8,551	8,545
Yield from forage (litres)	4,002	1,581
All purchased feed cost (ppl)	10.13	14.38
Saving (ppl)	4.25	

Feed cost savings identified milk from forage as a key performance indicator

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How to achieve happy, healthy hooves

A series of farmer-focused workshops in south-west England run by vets, nutritionists and industry representatives looked at what can be done to alleviate lameness in cattle and reduce associated costs. British Dairying reports on what signs to watch out for.

Lameness remains a key challenge on dairy farms, so a group of experts recently held a number of practical, 'hands on' technical workshops to help producers make immediate improvements on-farm. Crediton Milling, along with Zinpro, St Boniface Farm Vets, Blackdown Farm Vets, Andrew Fry Cattle Hoofcare and Tibbs & Simmons Vets joined forces to consider all the elements relating to cow lameness.

"Ultimately, if a dairy cow is lame, she will not walk to feed or drink, which will reduce her productive capability," says Dr Karen Wonnacott, Ruminant Nutritionist at Crediton Milling.

Early identification

"Nobody likes to see a lame cow, so the main thrust of these meetings was to utilise locomotion and mobility scoring to identify lameness as early as possible and apply the most effective foot trimming techniques to ensure the very best chance of success for happy, healthy hooves."

In its Dairy Costings Focus Report 2023, Kingshay reported the estimated cost of lameness to be £332/case (based on a milk price of 46ppl, concentrate costs of £360/t and a yield of 8,500 litres). "We all know that this is a huge cost to our industry, and we owe it to our lovely cows to do all that we can to improve



The 2023 Kingshay Dairy Costings Focus Report highlighted lameness as a huge cost to the dairy industry

the incidence of lameness on our farms," notes Karen. Research has successfully demonstrated that cows with healthy, pain-free hooves stay in the herd longer, have higher milk production and generate more long-term profit. And that is what everyone wants for a thriving and profitable dairy industry.

The farmers at the workshops found the anatomy of a cow's foot to be fascinating. For example, to support a typical 650kg cow, the weight needs to be evenly distributed.

Each claw is covered by a horn hoof capsule, which grows at about 5mm/month. A cow walks on the tip of her toes (toe length varies but is around 8cm long) and the hoof wall bears most of her weight.

Incredibly, cows have an in-built shock absorber – the digital cushion, a pad of fat that is located between the coronary band (the living tissue that produces horn) and the supporting pedal bone.

Farmers heard how sole ulcers are one of the most common causes of lameness in dairy cattle, and occur when the structures supporting the pedal bone within the hoof weaken. Trauma and pinching around a hook on the pedal bone where the flexor tendon attaches can produce inflammation triggered by the pedal bone sinking, which causes damage to the horn-producing tissue beneath.

In severe or persistent cases this halts horn production. As the sole wears, the area of damaged horn is exposed, leading to the development of a sole ulcer.

Multiple factors to the process:

- Calving – a hormone 'relaxin', which is released around calving, can weaken laminae in the claw which can cause the pedal bone to sink.
- Body condition score and thin digital cushion (made up of fat tissue

and connective tissue) – if cows are particularly thin or lose excessive amounts of condition around calving then they will lose fat within the cushions. The shock absorbing effect is then reduced, leading to more compressive damage to the corium.

- Shallow foot angle and claw overgrowth – this increases overloading and pinching in the heel (typical site of sole ulcers).

- Thin sole – this needs to be at least 8mm thick to withstand bruising and stone penetration.

- Prolonged standing time – this results in more force on the internal structures of the foot and potential damage to the corium (a result of too



Producers attended hands-on technical workshops to aid improvements



Dr Karen Wonnacott, Crediton Milling

much time spent in collecting yards, standing on concrete, uncomfortable beds, and so on).

This can also compromise blood flow to the feet and encourage inflammation (the body's response to injury).

- Poor environmental conditions – a result of too much slurry/concrete, uncomfortable beds, or herd dynamic changes (causing aggressive interactions between cows).

Inadequate or untimely treatment of lameness, or cows walking with uneven weight bearing on their claws, can lead to changes in the

foot anatomy. Bone growths (osteophytes) appear on the solar surface and around the dorsal aspect at the base of the pedal bone.

As the cow ages, her chances of becoming lame because of these bone growths increase. Sometimes the osteophytes become so extensive that the cow is permanently lame.

The vets showed the benefits of preventive trimming (eg Dutch Five-Step); the proactive use of more blocks (on the unaffected claw); and non-steroidal anti-inflammatory drugs, citing the excellent scientific evidence that supports this.



Anatomy models showing (left) fat pad, (right) a modelled foot

At the workshops, Zinpro's Dr Huw McConochie emphasised that lameness is a multifactorial problem that requires a holistic approach.

"We all must play our part in stopping bad things happening to good cows," he says.

Nutrition plays a crucial role in foot health, and CMC's range of dairy

compounds containing Availa Zn are producing positive benefits on farm, explains Karen.

"Zinc is a crucial trace element and vital in various physiological functions, including keratin formation and skin and hoof integrity, as well as reducing digital dermatitis and preventing foot rot."

Where to invest:

- **Comfortable beds** – cows need rest.
- **Transition cow pen** – zero tolerance to lameness in the dry cow pen.
- **Fresh cow trim** – the '100 days-in-milk (DIM) trim' is now considered too late to prevent lameness, so inspecting the feet at 35-50 DIM gives time to detect even the smallest problems and rectify them before they negatively impact production and performance.

Key take home messages:

- **Trimming** – inspect feet at 50 DIM - primarily modelling only; if there is no indication of problems in the front feet, only inspect the hind feet, but be careful. Horn growth is slower in cows in negative energy balance.
- **Spare the heel** – do not over trim.
- **Transition** – so many changes happen to these cows, so ensure that cleanliness, comfort and hygiene is as good as it can be.
- **Cow comfort** – beds **MUST** be clean and comfortable.
- **Nutrition** – this plays a crucial role in foot health. Correct management of body condition is key to reducing lameness in fresh cows. Sudden changes in diet can lead to outbreaks of lameness.



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Optimum hoof hygiene: Key to lameness prevention this spring

With the wet autumn and winter leaving many fields saturated with water, and a continued wet spring, it is more important than ever to be vigilant with hygiene routines during transition. British Dairying considers the risks and preventative measures.

Despite the continued focus on lameness, incidence levels show little or no sign of reducing – and the ongoing wet weather won't help.

"Lameness can cause disturbed resting and feeding patterns, reduced fertility, pain and discomfort, as well as having a direct effect on milk production in terms of daily yield – impacting dairy profitability," says Alison Cox, Global Application Specialist at Diversey Agriculture.

Lameness can be caused when the wall horn, made of keratin, is degraded by ammonia. Keratin is a water-soluble protein which provides structure and strength, but when hooves encounter urine (which contains ammonia), they soften. This allows bacteria in and increases the risk of lameness. Strong acids can counteract the impact of ammonia, rebuilding sulphur bridges in the horn and returning strength and hardness.

"We need to consider the changing environment in which we work."

"The general causes of lameness come from poor cattle housing, cows standing on hard surfaces for long periods, ineffective foot trimming, infectious diseases, and poor nutrition," says Alison. "However, many farmers overlook the risks of lameness caused through the transition period, when hoof hygiene should continue to be at the forefront of hygiene regime."

The critical role of any hygiene product is to promote the animal's defences. Footbath solutions continue to be the primary focus to address group applications. Although this offers the most practical option, improvements can be made in treatment to reduce



With the continued wet weather, producers need to be mindful of lameness during the transition onto grass

the impact on both the animal and the environment.

"Many farmers use highly acidic formalin or copper sulphate solutions in their footbaths, which rebuild and reverse the degradation process," says Alison. "But with a farm's success ever more linked to its environmental footprint, now is the time to question whether these options are the most sustainable for your farm. We need to consider the changing environment in which we work, and take responsibility for the future management of livestock enterprises."

Potential challenges

The price of milk will increasingly depend on environmental stewardship, she notes. "The dispersal of undissolved copper across the land does not readily support this, and just by its nature, formalin is detrimental to the perception of animal welfare, impacting on consumer value."

An alternative is available: "Diversey has developed an award-winning product which aims to address the challenges of the livestock industry while ensuring a product that is fit for purpose," she explains.

Deosan HH+ is based on acidified copper nitrate, a concentrated mineral acid which supports the reversal of the hoof degradation

process. It efficiently uses copper, so less is needed, and its liquid formulation makes it 100% water soluble, so there's no need for any residue dispersal.

Its soluble nature means no environmental impact, and its aim is solely to optimise hoof hardness; it does not trick the animal into thinking they are free from pain, so effective health and welfare protocols can be enforced.

"Deosan HH+ is a unique product that delivers all the benefits of a strong acid complex without any negative environmental impact, which has been proven in trials to show effective hoof hardening properties," notes Alison.

Measures to take

Proper maintenance of cow tracks and other high-risk areas like gateways, and reviewing particularly muddy areas caused by the recent weather, is also important. "As well as ensuring a thorough hoof hygiene routine, careful husbandry of the footbath and surrounding areas will also help to prevent lameness during the grazing season," she suggests.

"The areas immediately before and after the footbath should be clear of slurry to avoid needing to replenish the footbath solution so often. Sweep holding areas regularly and consider

positioning the footbath over a slatted passageway. The more cows that pass through the footbath, the less effective the detergent will be," Alison adds.

"Manure deactivates the chemicals used in a footbath which, if poorly managed, can become a harbour for infectious diseases. Where possible, employ a pre-bath to clean feet before the main bath solution, using plain water or a weaker bath solution to remove soil.

"When ready to replenish the footbath, drain completely, ensuring any residual slurry or grit is washed away and rinse with clean water before mixing a new batch of solution."



Alison Cox, Diversey Agriculture

DEVELOPING SUSTAINABLE BUSINESSES FOR THE FUTURE



THE ANTHONY WILLS DAIRY FARM DEVELOPMENT AWARD

Sponsored by: **Trouw Nutrition**
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The Dairy Farm Development Award, recognises dairy farm businesses that are planning and investing effectively for the future.

The award has been created in memory of Anthony Wills, the driving force behind Willsbro Holsteins, and the winner of the award will receive the Anthony Wills Memorial Cup.

Anthony's son Mathew, who is one of the award judges' comments: "Our father was always looking for the ways to develop Willsbro, to make it more sustainable and be a business fit for future generations. The winner of the award will display similar qualities: drive and passion."

So what types of business should consider entering the award? There is no doubt that dairy farms face an increasing barrage of challenges and must evolve to remain sustainable and profitable. As all dairy farms are different, there is no silver bullet, no 'one size fits all' solution. So how do you develop the best approach? Factors such as the desire of successors to enter the business, opportunities for expansion, diversification opportunities and personal motivations will all impact on the most appropriate development approach for a particular business.

"But many businesses have and will continue to evolve and develop in the most suitable way given their circumstances," Mathew continues. "We want this award to recognise those farmers who have taken a step back, looked at the business strategically, planned a way forward and then successfully actioned the plan."

Last year's winner, Charles George supervised the rapid development and expansion of the Brynhyfryd herd in Pembrokeshire over the past nine years. He focused on increasing cow numbers with associated increases in milk yields alongside improvements in health and fertility. The result is a business with clear development objectives and improvements in all the KPIs.

Cow numbers stand at 1,200, with yields of 13,500 litres per cow at 3.8% butterfat and 3.3% protein and a pregnancy rate of 28-31%. They invested in cow housing with sheds extended and more cubicles and space allocated per cow and have bred



cows that suit a large herd environment and are more persistent and functional.

Ongoing developments include new calf accommodation, making better use of slurry to reduce fertiliser use and taking action to reduce carbon footprint. Measures already undertaken include solar panels and LED lighting in sheds which have cut electricity bills by half, and we will be looking at reducing soya use.

"It was an outstanding example of a business that had looked at all the options, identified where they wanted to be and how they would get there and then implemented the plan in a focussed and committed way," observes category judge Trevor Birchall from TBAgri.

Trevor says a successful business could move in many directions. It might have taken the decision to expand the herd to support more family members and future generations. It could have identified labour as an issue and opted to move into using more automated solutions such as robotic milking. The decision could have been to invest in the current unit to drive efficiency and drive profitability, or conversely to scale back production to make a system more manageable and then drive efficiencies. It might have taken a decision to create an additional income stream such as on-farm processing.

Finally, a business might have decided the longterm strategy should be focussed on becoming environmentally more sustainable with efficient, healthier, profitable animals and an improved work life balance.

Whichever route has been selected; the entrants will need to demonstrate it was the best approach for their specific business.

The judges therefore hope to see a wide range of different approaches, but whatever

the approach adopted, there will be a number of factors they will be looking for. The development will be based on a robust assessment of the business, where it was and where it needs to be.

They will be looking for evidence of clear objectives and milestones to ensure the plan is on track during implementation.

Finally, how successful has the plan been - what are the results achieved so far, including any environmental benefits?

The final category judge, Georgina Thomas, Trouw Nutrition European Young Animal Feed Technical Manager with says: "Trouw Nutrition are delighted too once again be sponsoring the award, commenting that successful evolution of farm businesses is crucial for the future of the UK dairy industry. The industry needs progressive farmers with the determination to change their current practice for the better, whatever it might mean given their circumstances.

"They will be doing everything with sustainability in mind in its widest definition, embracing the planet, profitability and people. Sustainability of the whole business is part of business as usual, not an add-on. It is central to how everything is done. They will be taking a holistic view on the cows, not just focussing on milk yield, but also on health, income over feed costs, carbon and environmental footprint, staff mental health and welfare and so on.

"We know there are many excellent farmers who are developing their businesses successfully and we hope they will be encouraged to enter the award and make our job of choosing the winner as difficult as it was last year."

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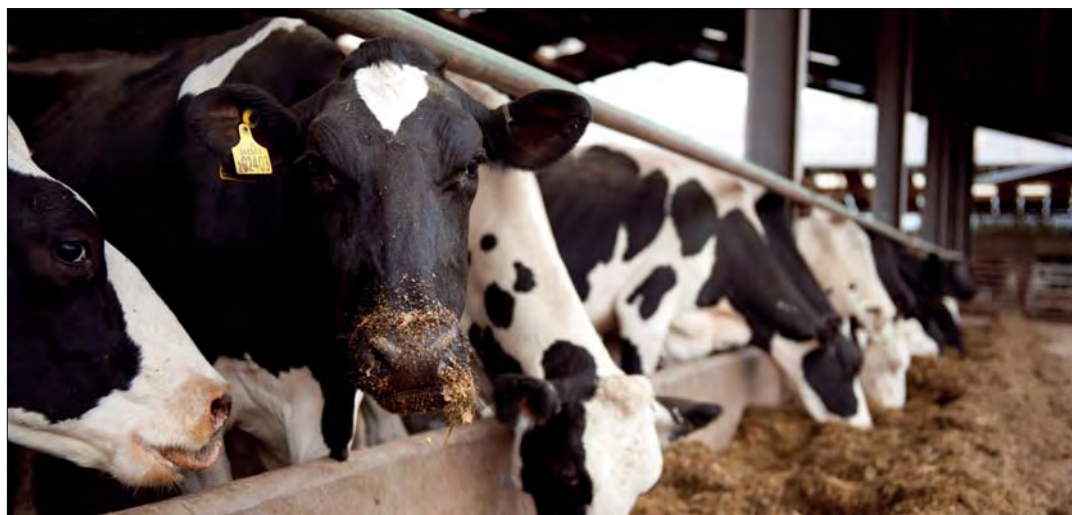
Both feed efficiency and carbon reduction can go hand-in-hand

With increasing pressure at farm level to increase profit margins while reducing environmental impact, British Dairying explores a cost-effective way of achieving both.

The past decade has seen dairy businesses become increasingly focused on improving efficiency and minimising costs, while also reducing their impact on the natural environment.

This shift in focus has come amid rising costs as well as commercial, public and political pressures around the climate change emergency. There is a great deal of pressure on the dairy industry to lower its carbon and wider environmental footprint, with an ever-present question of how farmers are rewarded fairly for emission reductions at farm-level to recoup the costs associated with innovation.

Although there is emphasis on lowering methane emissions to curb



Defra indicates that the national herd is now producing 11% more milk than in 2000, with 24% fewer cows

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agriculture's footprint, the science is clear. Efficiency gains at farm level are recognised as key to reducing the carbon footprint of ruminant livestock as well as boosting farm profit margins. These efficiency gains are mainly centred around fertility, longevity, animal health, and feed efficiency, says Kevin Doyle, Technical Manager at Phileo by Lesaffre.

Profitability key to success

In the effort to reduce carbon emissions, it is critical that dairy farms remain profitable and maintain milk production. There is not sufficient margin in the food chain for solutions that simply add cost and reduce carbon equivalent emissions without delivering other benefits.

It must also be recognised that the dairy industry is getting more efficient every year, with the national herd now producing 11% more milk than in 2000, with 24% fewer cows, according to Defra statistics.

More efficient feed conversion will have a strong effect on reducing the environmental footprint by reducing feed required to produce a litre of milk, says Kevin. Significant progress has been made through feed formulation, genetic selection, and animal health to improve feed efficiency over the past 30 years. And there are plenty

of opportunities to build further on progress already made, to help meet net zero commitments while driving profitability.

"Feed and forage production and digestion make up a huge proportion of both on-farm costs and emissions attributed to milk production," notes Kevin. "The efficiency with which cattle digest feed and convert it into meat and milk, therefore, has enormous potential impact on costs of production and environmental key performance indicators like carbon footprint.

Continued on page 66

Microbes make a difference

Differences in the rumen microbe population can account for most of the variability in a number of key performance indicators:

- 63% of variability of feed conversion efficiency
- 65% of variation in average daily liveweight gain
- 66% of variability in residual feed intake
- 73% of the variation in daily feed intake



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“Very efficient cows in early lactation have the potential to produce up to 2kg of energy-corrected milk (ECM) for every 1kg dry matter intake (DMI), with top herds achieving 1.7 litres/kg of feed throughout lactation.”

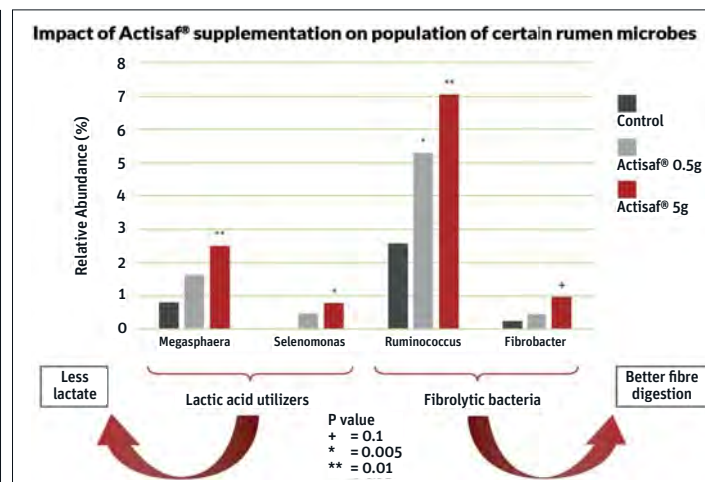
Livestock diets and feed efficiency are significant areas of focus for the industry moving forward. A less efficient animal requires more food to grow, with knock-on effects on things like health and fertility – meaning more money and resources are required for animals to meet their potential.

“Additional gains in terms of a system’s efficiency can also be made by improving fertility and cow longevity, meaning fewer replacements are needed to sustain herd size,” says Kevin.

Fine tuning cow’s engine room

Alongside gains in animal health, genetic improvements and nutrient management, significant opportunity exists to reduce emissions while focusing on the business’ key profit indicators.

“The rumen microbiome is a black box which we are only beginning to understand,” says Kevin. “It’s



The impact of Actisaf supplementation on population of certain rumen microbes

becoming increasingly obvious that by optimising the rumen environment and encouraging efficient microbial species through diet formulation, genetic selection and targeted probiotic supplementation, we can fine-tune the engine room of the cow to extract more from every bite and in turn lower the footprint of milk production.

“Science is revealing the power of the rumen’s microbes to unlock real benefits in terms of effective and consistent feed conversion

efficiency,” he adds. “This is an area into which Phileo continues ongoing research, working to create natural microbial feed additives which deliver broad benefits to the cow, environment and, ultimately, to a farmer’s bottom line.”

“There are many different available additives, and several claiming to stabilise rumen conditions, including yeast-based feed additives. It is, however, important to note that not all yeasts are the same,” says Kevin. “The consistency, efficacy and

response at animal level depends on how the yeast is produced, batch consistency, specific strain effects, stability of the live yeast and dose rates used.”

Dead yeasts and yeast cell walls supply nutrients, bind to mycotoxins and pathogens and support immunity by enhancing gut structure. Many of these are by-products of yeast production, with varying levels of quality and effectiveness.

“Only certain live yeasts have been shown to have a probiotic effect and support the growth of specific beneficial microbial species in the rumen. But with differing cell size, metabolic activity, concentration of live cells, physical structure, and strain-specific impacts on targeted microbes, not all live yeasts have an effect on the rumen microbiome,” he says.

Microbes able to flourish

Phileo’s flagship product, Actisaf Sc 47, is a specific strain of live yeast which is consistently shown to optimise rumen conditions naturally for a more anaerobic environment, allowing the right microbes to flourish. Its live cells are surrounded by a shell of protective dead cells,

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which means it reaches the rumen intact, alive, and able to do its job effectively.

Not only does this allow microbes to adapt more quickly to changes, but it also stimulates the growth of key fibre-digesting and lactic-acid-utilising bacteria in the rumen. Some of these, like *Megasphaera elsdenii* and *Fibrobacter succinogens* have consistently been found in the most efficient cows and are known to be affected by Actisaf.



Kevin Doyle, Phileo

“The rumen microbiome is a black box which we are only beginning to understand.”

“As a business, Phileo is committed to ensuring a feeding rate which brings farmers the outcomes they need,” Kevin explains. “We don’t believe in feeding any yeast to tick a box for rumen function; instead we recommend dose rates that ensure results, often containing 20-40 times more live yeast cells/cow per day than other products on the market.”

Life cycle assessment

Actisaf is also the first yeast probiotic with a Life Cycle Assessment (LCA), completed by Blonk Consulting and independently reviewed by a critical review panel, following the latest regulatory guidelines ISO 14040/44. This ensure its performance benefits can be accounted for in terms of CO₂e reduction at farm level.

An LCA is the gold standard for proving and documenting environmental impacts of a product, made on whole stages of the product life, from raw extraction to end of

life, as well as its external effects (eg impact on milk production). It considers multiple criteria and serves as a key signal to farmers, supply chain members and wider industry of recognised sustainability credentials.

Environmental benefits

In addition to carbon emissions, LCAs also account for other parameters like land use change, airborne particulate matter, ground acidification, and water use and eutrophication.

“It is now independently verified that Actisaf reduces the CO₂e emissions of milk by 5%, subject to period of supplementation,” says Kevin. “This equates to a reduction of 56t of CO₂e for every 1m litres of milk. On top of the environmental benefits, it can also generate a return on investment of up to 8:1, for an approximate cost of £15/cow per year.

“Science is recognising the important role of the microbiome in health and efficiency – optimising natural cycles and making best use of resources. Using a natural yeast-based feed additive with independently-verified environmental benefits and peer-reviewed research proving on-farm benefits seems to make sense for all key stakeholders.”



Diet and feed efficiency are significant areas of focus within the industry

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Net zero goal for Somerset farm

Using an emissions tracking app, along with making other small changes to farm operations, a Somerset farmer has achieved an impressive reduction in dairy emissions over the past three years. British Dairying reports on just how he has achieved it.

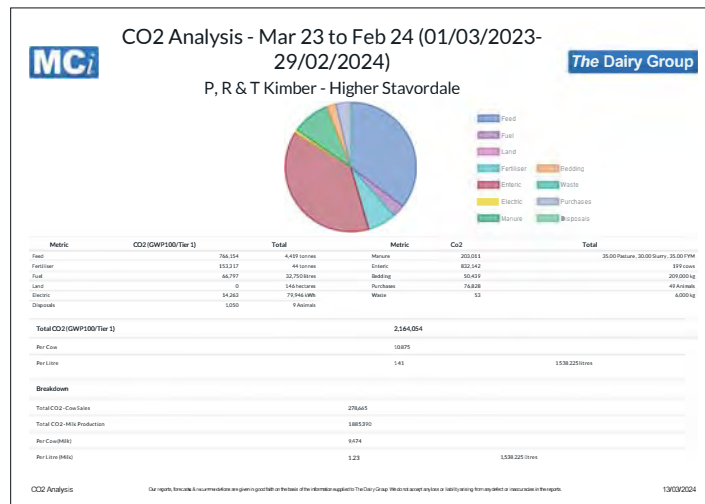
Tom Kimber farms in partnership with his parents at Higher Stavordale Farm near Wincanton, Somerset. The business manages 146ha of land, with 108 down to grass and 28 to forage maize. This supports a dairy herd of 200 cows, predominately Holstein Friesian with around 20 Dairy Shorthorn. Milk is sold to Barbers and through the farm shop. Beef calves remain on farm with the majority finished and sold through the family's farm shop.

Emissions Manager is the carbon footprint module in MCi, an app from the Dairy Group, which Tom has been using to track emissions from the dairy. This web-based tool utilises dairy herd performance data, ie herd and production details, feed inputs and resources like land use, fertiliser, fuel, electricity, plastic, and bedding. These are recorded monthly to allow emissions to be reported for any period. Data collection is either via web entry, an app, or bureau service. Being able to input resources in 'real time' allows ongoing benchmarking, so producers can monitor emissions and react in a timely manner rather than waiting for a historic year-end report to be produced some months later.

Benchmarking carbon

Currently the Kimbers' milk contract does not require a carbon audit, but Tom sees the benefits of recording data and assessing the farm's performance. "Carbon is a good indication of a farm's efficiency, so recording data and measuring is a good tool for benchmarking our performance, and improving profitability," he says. "We are all about optimising output; aiming to utilise grazed grass and forage to achieve around 4,000 litres from forage - but so many other resources have an impact on carbon emissions.

"I use Emissions Manager to provide a quick and easy way for recording and reporting my dairy emissions regularly," he adds. "Being integrated into the monthly costings makes it very convenient. We can run reports monthly to track my carbon footprint in real time and I work with my consultant to make informed decisions on the effect of



Using the app, Tom can easily monitor all aspects of the farm performance

resource inputs and output levels. I can also benchmark my resources and identify areas to target. This has been extremely helpful and has identified areas to work on."

Tom has been working with the Dairy Group Consultant, Richard Lane, for over nine years. Early on Richard provided nutrition advice and produced standard feed margin costings. In 2017, discussions rapidly broadened into a greater herd focus, when more analysis was put on fertility and health which highlighted challenges. Together they identified areas of weakness and implemented a plan of action.

Richard was awarded a Trehane Trust Fellowship in April 2021 to produce a report: 'A roadmap for achieving net zero in dairy farming practically and profitably'. This work has helped those at Higher Stavordale Farm to understand strategies to reduce carbon emissions while increasing profitability, as well as contributing to Emissions Manager's development.

In spring 2020, the farm began monthly milk recording and started using new herd management software. This allowed greater insight into individual cow performance and automated feed-to-yield in the parlour, leading to improved feed efficiency.

The team has worked at reducing diet protein levels. "Meeting metabolisable protein requirement is the key, not crude protein percentages," explains Richard. "This winter's diets

have been running at between 15.5% and 16% crude protein, with good results." The milk contract requires sustainable soya and palm ingredients, and aiming to avoid these feeds has helped reduce embedded carbon. Legumes have been introduced into most grass leys. This boosted silage crude protein, leading to lower protein concentrates fed ensuring lower embedded carbon feeds.

In autumn 2020, the farm decided to introduce a chopped straw transition partial-DCAB (dietary cation-to-anion balance) ration. This has almost eliminated milk fever and improved peak yields, which has helped improve each cow's carbon footprint, with yield increasing from 6,500 litres to 8,000 litres.

Reduced fertiliser use

Crop nutrition has been reviewed and Tom introduced clover into the grazing leys in 2020 with the aim of increasing nitrogen supply from legumes - reducing the amount of artificial nitrogen fertiliser required. For the past few years, the business has sown a grass cover crop after maize harvest. Although this was to reduce nutrient losses, it has proved successful, enabling zero grazing or an early silage cut before returning to maize. Zero grazing is also used for short periods if there is deficient grass on the grazing platform, to avoid having to open silage pits.

Multi-species leys are being planted across the grass platform.

Benefits include increasing nitrogen fixation from legumes and deeper rooting plants, sequestering carbon deeper into soils. "We hope that deeper rooting will help improve soil structure and mitigate some of the effects of climate change," says Tom.

The farm is assessing options to achieve six-month slurry storage. The aim will be to store and use slurry more effectively in the future, using umbilical and trailing shoe applications, thereby reducing artificial fertiliser and carbon losses.

Three phase electricity supply has recently been installed, along with a variable speed pump and a heat recovery unit to help reduce electricity demand. The farm also has a small solar array and is planning an additional array with batteries to boost green generation. In addition, Tom is considering automatic slurry collection, which will help improve cow hoof condition and reduce ammonia emissions.

Tom has been recording resources in MCi for over three years, and with good records it has been possible to backdate carbon calculations with confidence. Since the first year of recording (ending October 2019) when the farm was emitting 1.45kg CO₂e/kg of energy corrected milk (ECM), it has reduced that to 1.23kg CO₂e/kg ECM. "Multiple actions have resulted in the reduction and we anticipate reducing to below 1kg CO₂e with the changes and investments that have already been made," notes Richard.

Tom is optimistic about his goals: "We are confident that we are on the right track and we can track our progress towards net zero."



Richard Lane, Dairy Group Consultant

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Lower carbon beef gives more dairy farmers choice of dedicated genetics

A pioneering beef and dairy initiative gives stability and security for dairy farmers in a move that also achieves reduced environmental impact. British Dairying finds out more.

Last autumn, in a first for the industry, a 25% lower carbon beef range was sold from Sainsbury's shelves. This was the first output from Gamechanger, a pioneering fully integrated dairy and beef scheme with Sainsbury's and food processor ABP, which aligns dairy farmers, calf rearers and cattle finishers.

The aim of the initiative, set up in 2019, is to consolidate the supply chain from start to finish, offering dairy and beef farmers an easy management, low risk income stream. In turn, Sainsbury's gets a consistent, high-quality beef product with a lower environmental impact for its Taste the Difference range.

For dairy farmers it creates greater value and purpose for dairy calves, with the advantage of a guaranteed market and forward pricing.

Early scheme adopter

Jack Allwood milks 800 cows at Huntington Hall Farm, Cheshire, with his father John. He was an early adopter of Gamechanger and is now in his fourth year producing over 300 calves a year. He was returning to the farm from university and was initially attracted by a low-risk and complementary diversification that would give him a guaranteed advance price per calf.

"Getting a fixed price for each calf at insemination takes the market volatility away and allows us to have



Sainsbury's Gamechanger is the first retail scheme to establish a fully integrated dairy and beef supply chain

more confidence to plan and grow," he says. "But we've realised as we've gone along all the other benefits of the programme for management and margins.

Fewer health issues

"Gamechanger's strong focus on genetics means shorter gestation time, really good herd health and a consistent feed conversion rate. We get the calves off quicker and the cows back into the parlour, and the growth parameters are pragmatic. This means we've had fewer health issues as we are not over- or under-feeding

to reach target weights. These are all marginal gains that make a difference, which is how we like to work."

Genetics underpin the Gamechanger programme. Over many years, Genus has analysed tens of thousands of records of the full life cycle to achieve a beef match with dairy cows that optimises shorter gestation, easy calving and healthy herds. This year Cogent has also joined to help build the programme and offer dairy farmers access to a wider choice of dedicated genetics.

Aberdeen Angus sires. The calves need to be a minimum of 45kg at 10 days and move to a rearing unit once they reach weight parameters, usually between 10 days and three weeks. Collections are every two weeks.

Getting calf health right is critical to getting good sized, uniform calves for Blade to send on to the rearer. "The emphasis is on giving the calves a good start with high-quality colostrum, and steady, consistent weight gain," explains Jack. "Blade sets realistic growth specifications and they know when they collect the calves from us, that they are healthy and in good shape. I've lost time and money on calves on previous contracts through over- or under-feeding to meet target weights, and if we're managing them back to health for two weeks, it can cost us an extra £60/calf."

"The emphasis is on giving calves a good start."

These efficiencies reduce the cost of production as well as the environmental impact, a dual gain for both producers and Sainsbury's, which is marketing to increasingly carbon conscious consumers.

At Huntington Hall Farm, any cows not suitable for breeding replacements into the dairy herd are served with artificial insemination from one of Gamechanger's dedicated

Consistent income stream

Jack, who studied accounting and finance investment at Newcastle University before returning to the farm three years ago, has always been interested in data and performance. He knows it costs him approximately £30/week per calf in

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Continued on page 72.

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In an exciting development for the British dairy industry, REAL Success has announced it will sponsor a new category at the British Dairying Cream Awards in September - the Commitment to People Award. This initiative marks a significant step towards recognising and promoting excellence in farm management, specifically focusing on the treatment and development of farm staff.

The dairy sector faces numerous challenges, with labour being one of the most pressing. The Commitment to People Award aims to celebrate farms demonstrating exceptional commitment to becoming employers of choice through innovative recruitment, staff retention strategies, and a focus on creating a safe and nurturing work environment.

Paul Harris, CEO and Founder of REAL Success, will judge this award working with



the judging panel. He brings a wealth of leadership experience and a deep understanding of the people issues facing the dairy industry and is a regular speaker at industry events. His leading role in the industry and thought leadership underscores the importance of the award and the critical value placed on sound people management practices in the farming business.

The award criteria reflect the multifaceted nature of effective farm management. Entrants will be evaluated on their ability to place people at the heart of their operations, demonstrating this through developing people management skills, ensuring workplace safety, and fostering an environment where communication thrives.

Furthermore, the judges will look for innovative initiatives to attract and retain staff, highlighting the significance of progressive thinking in tackling the industry's labour challenges.

The award also seeks to recognise the importance of continuous learning and development, not just for the workforce but also for business leaders themselves. This aspect underlines the belief that a farming business's growth and improvement are driven by its leaders' personal development and commitment to investing in its people.

"Winning the Commitment to People Award offers farms a unique opportunity to distinguish themselves as premier employers in the dairy industry," comments CEO Paul Harris. "This recognition can significantly enhance a farm's reputation, attract skilled workers, and set a benchmark for excellence in people management within the sector."

"As the dairy industry continues to navigate its challenges, REAL Success' introduction of the Commitment to People Award is a timely reminder of the critical role that effective leadership and a dedicated workforce play in ensuring the sector's sustainability and growth. The award invites farming businesses across the UK to showcase their commitment to their most valued asset: their people."

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Continued from page 70.

staff and bedding, and this allows him to anticipate the margins he will get upfront from each calf when it leaves the farm. Gamechanger pays for the calves within seven to 14 days, which allows for a steady and consistent income stream.

"Although the price we get per calf is less than those sired by the British Blues we had before, we've lost fewer calves and they leave the farm quicker, so all-in-all, it's more efficient and a more profitable way to do it," notes Jack.

Getting the calves away younger has benefits by making more room and a healthier, environment, space and air quality for the other cows.

"One of my greatest frustrations is how poorly we put across the dairy story."

The Allwoods milk three times a day in a rotary parlour, aiming for 13,000 litres/cow. They make the most of the sandy soil, growing over 405ha of crops, maize, grassland and wheat, all to feed the cows.

Jack started a vending machine business last year, now selling 1,400-1,600 litres of milk a week to the large urban customer base on his doorstep in the city of Chester. Up to 90% of the sales are milkshakes. Being able to tell the public about the Gamechanger programme has been an asset for Jack, as part of his mission to educate the wider public on the dairy farming story. "It was a real benefit doing a non-agricultural degree at university, as most of my friends were non-farming and I learned a huge amount about how farming is perceived.

Engaging a negative story

"I came back to the farm with new perspective," he explains. "One of my greatest frustrations is how poorly we put across the dairy story as an industry, and I want to engage with the public and counter the negativity. I think we can all be very frightened of the anti-farming agenda, but I'm not scared to stand up for what we are doing, and actually in my experience of speaking to customers and hosting open days, they are curious and very open to learn more.

"When I explain what we do and why we do it – not using lots of technical farming language,



Jack returned to the farm three years ago after studying accounting and finance investment at Newcastle University

explaining bedding like changing the bed sheets; or, rather than four lactations, they are pregnant four times, avoiding words like 'slaughter' – they are very interested, and they are our ambassadors for UK dairy produce," he says.

The vending machine, which will soon become two, is set up as a food retailer separate to the farming business, with Jack buying the milk from the farm. He is also building a viewing gallery for visitors to be able to see the cows being milked in the parlour. "It's great being able to explain Gamechanger's positive approach to welfare, fair returns and to the environment at every stage of production, to produce beef with 25% less carbon."

The Gamechanger programme, with its flexible grower models, finance options and cost-plus contracts, can be attractive for both new entrants and existing farmers looking for an additional income stream. Some dairy farmers have started keeping calves to rear before sending them to a finishing unit, moving them to a weaning shed, and some are undertaking the full process of dairy to finish, which can be done, among other options, on a set management fee for very low-risk guaranteed income.

With the rapidly growing demand for Gamechanger beef from Sainsbury's, ABP is seeking more dairy farmers to join its network. "ABP has always been a driver for progress and it's fantastic to see the Gamechanger network expanding and strengthening with so many quality producers," says Senior Agricultural Manager Laura Peyton.

Integrated supply chain

"Sainsbury's is the first retailer to establish a fully integrated supply chain like this, and working in partnership with our primary producers is key to the programme's success," she adds. "In offering a high-quality, consistent, valued product for the consumer, we need

to do the same for the producer with easy management and price stability. We're constantly developing flexible options at each of the different production stages, designed so they can fit seamlessly with – and complement – existing enterprises."

The programme suits progressive thinkers looking for a stable, easy management enterprise with access to practical and technical support, which means rearing and finishing experience is not essential, points out Laura. "The Blade team and our partner vets are there to guide, and the free access to technology gives producers the insights to farm ever more efficiently, and constantly improve production and environmental performance."

Being part of Gamechanger

All calves are tagged with electronic identification at birth to measure feed intake, conversion and performance throughout their life cycle and maximise efficiencies.

To breed calves for Gamechanger, dairy herds must have Holstein Friesian stature. All-year calving is ideal, but not essential, and the farm must be Red Tractor assured. Sharing milk recording data is part of the criteria to allow the team to forward plan supply.

For those wishing to continue rearing or finishing, there are different models, including buying the calves outright, a B&B model or making the most of finance. In addition to forward pricing, bonuses are given for exceeding key performance indicators.



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Captain sons make their mark

The April 2024 proof run has been a good one for Cogent, for the DG prefix and for sons of Genosource Captain. Independent breeding consultant Kevin Lane reports.

The latest bull proof run includes the annual base change, where the figures are adjusted to reflect the genetic progress made in the past 12 months. This means that the average 'base' animal has a predicted transmitting ability (PTA) of zero for each trait. All breeds are affected and it is important to remember that the data for each bull hasn't dropped, rather that the base from which the figures are derived has changed.

The Holstein breed has effectively dropped £40 of profitable lifetime index (PLI) to reflect the gain; the greatest change of all the breeds (although breeds are not comparable), followed by the Jersey with -£19 and then the Brown Swiss with -£16. Other adjustments of note for the Holstein include -27 for the milk base, -1.8kg of fat, -1.5kg of protein, -9 days lifespan and -0.11 type merit.

This proof run sees 35 genomic bulls over £800 PLI, 200 bulls over £700 and 438 (out of almost 800) over £600, giving farmers plenty to choose from irrespective of system. The top 100; £749 PLI and above, sees some new entries, some fallers and some risers, with many bulls from the last run holding their positions.

The new number one is up from sixth; **DG Peace** (£908), gaining £22 PLI (despite the base change), and he offers 1,080kg of milk, 46.9kg of fat and 41.3kg of protein at +0.04% and +0.06%. Maintenance is a low -25, Feed Advantage is +281, EnviroCow the highest in the breed at +4.8 and HealthyCow £161.

Second and third go to **DG Space** (£873) and **DG Dillion** (£868) with **Cogent Koepon Rocky** (£865) in fourth, all marketed by Cogent and all sired by Genosource Captain.

Space is lower production but higher health than Peace, offering 691kg of milk, 41.6kg of fat at +0.15% and 32.9kg of protein at +0.11%. He has £259 HealthyCow, helped by -22 somatic cell count (SCC) and -2 mastitis, +2.9 CalfSurvival, +9.3 fertility and +98 lifespan.

Dillion is somewhere between the two, with 761kg of milk, 45.3kg at +0.16% of fat and 32.6kg at +0.08% of protein. HealthyCow is £230 with +200 FeedAdvantage, +2.7 LamenessAdvantage, +3 CalfSurvival



DG Peace is the new number one genomic bull, with a PLI of £908, offering the highest EnviroCow in the breed

and +131 lifespan. Rocky is a high milk sire with 914kg and 44.3kg of fat and 37.4kg of protein, both at +0.08%. Maintenance is a low -24 with a correspondingly high FeedAdvantage of +259, +4.5 EnviroCow, +2.4 LamenessAdvantage, +2.1 CalfSurvival and +95 lifespan.

Dropping just two places is high health bull **Peak AltaMorpheus** (£863) who is another with a nice balance of production and fitness. He offers 688kg of milk, 46.6kg of fat at +0.21% and 28.5kg of protein at +0.07%, -13 maintenance, +£255 HealthyCow, +4.2 EnviroCow, -20 SCC, +2.6 CalfSurvival, +159 lifespan and +10.1 fertility.

The former number one **Denovo 2776 Leeds** (£862) is still the highest milk sire available, and he has good health traits and environmental credentials. He offers 1,256kg of milk with 50.5kg of fat at 0.00% and 38.7kg of protein at -0.03%, a total of 89.2kg combined fat and protein (CFP). He scores -12 for maintenance (breeds smaller than average daughters) and has a correspondingly high FeedAdvantage value of +240.

The FeedAdvantage score means that his daughters are predicted to consume 240kg less dry matter in each lactation than those with comparable production but sired by an average FeedAdvantage bull. As the dairy industry steps up its drive for feed efficiency, this score takes on an added importance, hence its inclusion in PLI.

Another former number one, **Wilra SSI Faneca Ebersol** (£857), drops three places to seventh, but still offers solid figures across the board with 679kg of milk, 47.9kg of fat at +0.23% and 27.8kg of protein at +0.06%. That's from daughters that are smaller than average, giving him a maintenance score of -11; this also helps his FeedAdvantage value of +208. Ebersol has a high HealthyCow value of £237 with excellent udder health of -26 SCC and -2 mastitis, a high EnviroCow value of +4.1 and scores of +8.3 for fertility, +113 days lifespan and +2.8 LamenessAdvantage.

Staying in eighth is **Progenesis Pineapple** (£848), who offers high production with 780kg

of milk, 48.5kg of fat at +0.19% and 40.4kg of protein at +0.16%, with a HealthyCow value of £121. **Peak AltaOrvar** (£840 PLI) offers positives for most traits including 725kg of milk, 42.7kg of fat at +0.15% and 33.7kg of protein at +0.11%. He has -18 maintenance, +190 FeedAdvantage, £187 HealthyCow, +4.2 EnviroCow, -15 SCC, +113 days lifespan and +12 fertility.

High milk bulls

As usual, it's interesting to look at the bulls which excel in certain traits, starting with the high milksires. There are 30 bulls offering over 1,000kg PTA for milk, and eight over 1,100kg, with Leeds the highest. He is followed by **Genosource Cap Jerrick** (£746 PLI) at 1,178kg and then **Genosource Illusion** (£760) on 1,168kg, closely followed by **DGF Adrian** (£640) on 1,160kg. Next is **Mahjong** (£639) with 1,127kg and then **OCD Thorson Darth Vader** (£798) offering 1,122kg of milk.

None of the plus 1,100kg on milk offer over £200 HealthyCow and only Leeds, Darth Vader and

TOP 20 HOLSTEIN BULLS WITH GENOMIC INDEXES RANKED ON PROFITABLE LIFETIME INDEX (PLI) APRIL 2024

PLI	Bull name	Milk kg	Fat kg	Ptn kg	Fat %	Ptn %	SCC	Mast	LA	LS	FI	HC	Feed Adv	TM	Sire	From
908	DG PEACE	1080	46.9	41.3	0.04	0.06	-14	-2	1.9	95	3.8	161	281	0.67	Captain x Klutch	CBL
873	DG SPACE	691	41.6	32.9	0.15	0.11	-22	-2	1.9	98	9.3	259	150	1.31	Captain x Charl	CBL
868	DG DILLON	761	45.3	32.6	0.16	0.08	-19	-2	2.7	131	3.4	230	200	1.46	Captain x Crimson	CBL
865	COGENT KOEPON ROCKY	914	44.3	37.4	0.08	0.08	-14	-1	2.4	95	3.8	163	259	0.6	Captain x Kenobi	CBL
863	PEAK ALTAMORPHEUS	688	46.6	28.5	0.21	0.07	-20	-2	1.8	159	10.1	255	167	-0.36	Curfew x Crimson	ALT
862	DENOVO 2776 LEEDS	1256	50.5	38.7	0	-0.03	-16	-1	1.2	131	3.5	170	240	0.48	Laker x Free Billy	GEN
857	WILRA SSI FANeca EBERSOL	679	47.9	27.8	0.23	0.06	-26	-2	2.8	113	8.3	237	208	0.56	Faneca x Legacy	WWS
848	PROGENESIS PINEAPPLE	780	48.5	40.4	0.19	0.16	-14	-1	1.7	88	-0.1	121	117	1.15	Holysmokes x AltaSohot	SMX
840	PEAK ALTAORVAR	725	42.7	33.7	0.15	0.11	-15	0	1.3	113	12	187	190	-0.14	AltaZeolite x AltaPlinko	ALT/AIS
839	PINE-TREE GS CRUZER	1079	41.1	37.7	-0.02	0.02	7	1	2.6	107	5.9	165	294	1.64	Captain x Skywalker	CBL
839	PROGENESIS DISRUPTOR	984	53.4	39.4	0.15	0.08	-18	-2	1.3	107	-1.2	132	141	0.77	Holysmokes x AltaZazzle	SMX
839	GENOSOURCE SECURITY-ET	652	49.4	28.5	0.26	0.08	-16	-1	3	122	10.6	254	102	0.89	Upside x Renegade	CBL
838	COGENT CARTELL	1104	45.9	39.4	0.02	0.03	-7	0	1.7	88	6.1	165	217	1.1	AltaAlanzo x Captain	CBL
827	HUL-STEIN NAIL	977	52.5	36.3	0.14	0.05	-11	-1	2.6	128	0.7	147	146	0.74	Benefit x Endeavor	GEN
826	DENOVO 20376 ABSOLUTE-ET	682	55.5	31.4	0.31	0.1	-15	-2	1.3	110	1	152	159	1.02	Allied x Verdi	GEN
824	PEAK ALTACALABRIA	780	50.3	38.3	0.21	0.14	-14	-1	2	61	4	119	125	0.08	All Access x AltaZazzle	ALT
819	PROGENESIS ALTAVANDYKE	854	53.5	34.8	0.21	0.07	-25	-2	2.6	95	1	138	155	0.01	AltaZemini x AltaPlinko	ALT
819	PINE-TREE SHADOW	841	48.4	38.9	0.16	0.12	-9	-1	3	67	0	78	225	-0.35	AltaParcheesi x Free Billy	GEN
819	DENOVO 19495 HARGROVE P	686	46.5	35.9	0.21	0.15	3	1	1.6	70	2.6	80	285	0.23	Memorial x Acura	GEN
816	PEAK ALTABEMINE	773	48.1	36.3	0.19	0.12	-31	-3	1.2	64	5.8	153	128	-0.74	AltaZemini x AltaPlinko	ALT

Source: AHDB Dairy. AIS = AI Services; ALT = Alta; CBL = Cogent Breeding; GEN = Genus ABS; SMX = Semex; UKD = UK Sires Direct; WWS = World Wide Sires UK. £PLI = Profitable Lifetime Index; Rel = Reliability; SCC = Somatic Cell Count; Mast = Mastitis; LAdv = Lameness Advantage; CS = Calf Survival; LS = Lifespan; FI = Fertility Index; GL = Gestation Length; TB Adv = TB Advantage; EHC = HealthyCow; Feed Adv = Feed Advantage; Env Cow = EnviroCow; TM = Type Merit.

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seventh-placed Cartell have a FeedAdvantage value over +200. The average lifespan for the 30 bulls over 1,000kg for milk is +83 days, set against +121 days for the top 21 fertility bulls (over +12), excluding the Irish Holstein Friesian bulls. The fertility average of this high milk group is +2.5 and the HealthyCow average is £139.

High fat and protein bulls

There are 20 bulls over 85kg CFP, with three over 90kg and 49 over 80kg; four of the top 10 are in the top 20 PLI. Highest is **OCD Thorson DARTH Vader** on 94.6kg. He is followed by **Progenesis Disruptor** (£839) on 92.8kg. He also offers 984kg of milk, 53.4kg of fat at +0.15% and 39.4kg of protein at +0.08%.

Next is **Denovo 20027 Luca** (£803) with 92.2kg, who offers positive percentages, +4.3 EnviroCow and +2.4 LamenessAdvantage. He is closely followed by Leeds.

There are 37 bulls with over 50kg of fat, with Luca the highest at 59.1kg, followed by **Denovo 2826 Cash** (£750) on 58.9kg and DARTH Vader on 57.1kg. The top protein bulls by kg are Peace, Powerhouse, Pineapple



Gen Durkje, the dam of DG Dillon, who's now third in the genomic ranking

and Cartell. There are 10 bulls over 38kg of protein and only one is a small minus for protein percentage, with all over 780kg of milk.

High fertility bulls

Some 21 Holstein bulls have a PTA for fertility index of +12 or greater (more if you include the Irish Holstein Friesians) and nine of +13 or more. Fertility is a key selection index for many farmers given the influence that the trait has on farm profitability. Of interest is that of the top 50

genomic Holstein bulls ranked on fertility, only 10 are in the top 100 for PLI, and most, although not all, have more moderate production levels but good scores for other health and fitness traits. The HealthyCow average for these top 50 is £223, and the PLI average a respectable £658.

Once again there are a number of Irish-bred bulls in this fertility ranking, including five out of the top six; this number has increased significantly over the past couple of years due to the continuing popularity of Irish genetics. The highest value is **Stamullen Mozart** (£23) on +18.8. He is followed by **Santry Lion King** (£26) on +18 and then **Shandangan Rex** (£178) with +17.7 and **Bauravilla Pistol** (£85) on +17. These are the only ones over +17. All of the Irish are at least minus 500kg of milk on the Holstein base so will be discounted by most bar grazing enthusiasts.

So the eighth ranked fertility bull and first Holstein with +15.3 is **Peak AltaZingler** (£704), who is a high health trait bull with a very high £288 HealthyCow. He also offers 474kg of milk and 50kg CFP, +2.7 LamenessAdvantage, -25 SCC and -2 mastitis, +162 lifespan days and +3.3 EnviroCow. **Denovo Ryden** (£479) is next on +14.8 and while a low production sire – only +16kg of milk and 22.7kg CFP, he does offer +0.14% and +0.12% fat and protein and £247 HealthyCow.

Next is **Progenesis Thriller** (£800) who sits just outside the top 30 ranked on PLI and is an interesting all-rounder. He offers 449kg of milk, 70kg CFP at +0.30% and +0.12%, -22 maintenance, £215 HealthyCow, +4.1 EnviroCow, +134 lifespan and +14.6 fertility.

Peak AltaSolace (£719), at +14.6 fertility, has good production with 534kg of milk and 60.7kg CFP and very good components. He also

has a high HealthyCow value of £247 as well as -31 SCC and +119 days lifespan. **Peak AltaSeverus** (£811) ranks 25th overall on PLI and +13.7 for fertility. His milk is a solid 749kg with 73.2kg CFP, +0.12% fat and +0.09% protein, £205 HealthyCow -25 SCC, -2 mastitis and +137 days lifespan.

High lifespan bulls

Lifespan is a popular filter for farmers looking to increase herd life, and there are 47 offering +150 days or more lifespan and 14 over +170 days. The high correlation between lifespan and HealthyCow is evident, with the +150 days group averaging £245 HealthyCow (the top 100 PLI bulls average £183 HealthyCow).

Long-term topper for this filter was Badger SSI Big Al Newman, but he has now graduated to the proven list. The new leader on 210 days is **Koepon Simply Red** (£785), a top 50 PLI bull with 1,071kg of milk, 56kg CFP, -16 maintenance, a huge £343 HealthyCow, -34 SCC and -3 mastitis and +9.6 fertility; he has big negatives on percentages.

Delta Taskforce Red (£505) is in second with +201 days and again is a moderate production sire with 144kg of milk and 28kg CFP, with plus percentages. HealthyCow is £237, CalfSurvival is +2.8 and TB +3.5. **Delta Primetime PP Red** (£592) is third with +198 days. He is also a moderate production sire with 171kg of milk and 35kg CFP, with plus percentages of +0.14% and 0.12%. HealthyCow is £285 and SCC is an exceptional -30, as is mastitis at -5 (making him a breed leader).

Delta Borax Red (£552) is next and offers +186 days as well as a solid production proof of 249kg of milk, 38.8kg of CFP with positive percentages, good udder health at -28 and -3, +3.4 fertility, £253 HealthyCow and +2.2 for feet and leg composite.

Delta Cartoon P Red (£606) is close behind and offers +177 days as well as a solid production proof of 475kg of milk and 35kg of CFP. He has good udder health at -20 and -2, +9.4 fertility, £302 HealthyCow and +3.7 for CalfSurvival.

High HealthyCow bulls

The HealthyCow index is a useful composite of key health traits and a quick selection filter. **Koepon Simply Red** is the breed leader at £343. Second is **Lars-Acres George Miller** (£778) who has a HealthyCow value of £305 with 332kg of milk and 54kg CFP, +0.19% fat and +0.15% protein. SCC is -27, mastitis -3, lifespan +174 days and fertility +12.4. Next

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BREEDING MATTERS

TOP 20 DAUGHTER-PROVEN HOLSTEIN BULLS RANKED ON PROFITABLE LIFETIME INDEX (PLI) APRIL 2024

PLI	Bull name	Milk kg	Fat kg	Ptn kg	Fat %	Ptn %	LA	CS	LS	FI	Mast	HC	Feed Adv	TM	Sire	From
874	GENOSOURCE CAPTAIN	1187	49.5	37.6	0.02	-0.02	1.7	2.8	104	5	0	180	289	1.85	Charl	CBL
778	WESTCOAST RIVER	805	33.4	30.8	0.01	0.05	2.3	2.3	140	10	-2	286	70	1.25	Guarantee	SMX
722	AARDEMA PISTOLERO	539	26.5	25.2	0.06	0.08	1.2	2.6	149	12.3	-2	275	109	0.21	Guarantee	SMX
717	WINSTAR GREYCUP	588	40.4	27.8	0.19	0.09	2.2	1.1	122	7	-1	162	162	-0.36	AltaZazzle	SMX
710	FB KENOBI TARGARYEN	729	26.3	36.2	-0.03	0.14	1.6	1.1	98	3.1	-1	160	66	0.96	Kenobi	GEN
706	DENOVO 15567 KIMMEL	969	39.3	35.9	0.01	0.04	0.8	1	131	5.5	0	143	41	-0.3	Kenobi	GEN
703	BOMAZ KETTLE	675	45.6	34.9	0.21	0.14	0.8	1.7	64	-2.6	-1	47	110	-0.47	Kenobi	GEN
701	PEAK MAUNEY	382	30.9	21.3	0.18	0.1	2.2	2.1	134	14.3	-1	273	57	0.46	AltaRobert	UKD/AIS
695	PROGENESIS WIMBLEDON	98	31.7	23.6	0.33	0.24	2.1	-0.3	92	14.4	-2	233	-38	0.34	AltaRobson	SMX
695	BADGER SSI BIG AL NEWMAN	453	32.8	15.8	0.17	0.01	1.6	2	198	8.6	-3	298	163	1.33	Big Al	WWS
692	WINSTAR GRAZIANO	323	40.2	21.6	0.32	0.13	1.8	1.9	98	8.9	-1	188	134	-0.26	AltaZazzle	SMX
691	DENOVO 7899 ARCHER	762	41.7	35.4	0.12	0.11	3.1	2.1	12	-2.4	2	56	144	1.45	Achiever	GEN
691	STGEN BETTERMENT	619	36.2	26	0.13	0.06	2.4	-0.9	113	7.1	-2	184	128	0.26	AltaZarek	CBL
690	DENOVO 406136 DONNELLY	524	45	28.9	0.27	0.13	1.4	1.9	61	-0.9	-2	124	51	0.82	Merrimac	GEN
689	SILVERRIDGE V EINSTEIN	767	37.3	31.9	0.07	0.07	1	-0.1	116	4.7	-1	165	12	1.32	Topnotch	SMX
689	TOPSTONE	975	32.1	32	-0.08	0	1.8	1.1	110	5.1	-2	189	82	1.32	AltaTopshot	SYN/WFE
684	DENOVO 15826 KNIGHT	595	27.3	26.5	0.04	0.08	2	1.8	140	2.2	0	196	135	1.71	Kenobi	GEN
674	DENOVO 14744 GINETTA	836	46.5	34.8	0.14	0.08	0.8	2.3	52	5.1	1	86	35	0.32	Guarantee	GEN
669	WINSTAR AMBITION	784	46.2	31.9	0.16	0.07	0.2	2.2	61	1.1	1	64	117	0.36	Crimson	GEN
665	WESTCOAST GUARANTEE	326	23.3	24.6	0.12	0.16	0.7	3.4	95	6.9	-4	209	141	-0.88	Boastful	SMX

Source: AHDB Dairy. AIS = AI Services; CBL = Cogent Breeding; GEN = Genus ABS; SMX = Semex; SYN = Synthetics; UKD = UK Sires Direct; WFE = Western Farm Enterprises; WWS = World Wide Sires. £PLI = Profitable Lifetime Index; SCC = Somatic Cell Count; Mast = Mastitis; LAdv = Lameness Advantage; CS = Calf Survival; LS = Lifespan; FI = Fertility Index; GL = Gestation Length; TB Adv = TB Advantage; EHC = HealthyCow; Feed Adv = Feed Advantage; Env Cow = EnviroCow; TM = Type Merit.

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Continued from page 77.

is Delta Cartoon Red followed by **Penn-England Barber** (£644) on £301 HealthyCow, who offers 424kg of milk and 46kg CFP with components of +0.14% and +0.03%. SCC is one of the best in the breed at -32 along with -3 mastitis, +128 days lifespan, +9.2 fertility and +2.5 EnviroCow.

Best FeedAdvantage bulls

Fifteen of the top 20 are in the top 100 PLI sires and there are 42 bulls with a PTA of over +200 for FeedAdvantage (each point is a kg of dry matter intake saving per lactation for adjusted milk yields).

At the top is **Pine-Tree Cruz** (£839) on +294, followed by **Denovo 19495 Hargrove** (£819) on £285 and then DG Peace (+281). Next is DARTH Vader on +273 followed by Pine-Tree Denovo Avon (£709) with +266 and then **Hul-Steins Demetrius** (£802) on +265. Unsurprisingly, all of the top 100 on FeedAdvantage are negative for maintenance; this indicates a big correlation between size and feed efficiency. In fact nothing in the top 300 ranked on FeedAdvantage has a +10 maintenance or higher.

Best EnviroCow bulls

The previously mentioned Peace, Cruz, Hargrove and Leeds are the best for EnviroCow on +4.8 to +4.6, with two other bulls on +4.5: Denovo 17579 Gip and Cogent Koepon Rocky. All of the top 30 for this trait are in the top 100 on PLI (four in the top 10), indicating that there is a very high correlation between PLI and the EnviroCow index. Some 50 bulls score +4 or more for this trait, with all of these over +100 on FeedAdvantage.

Marco Winters, Head of Animal Genetics at AHDB, says: "Genosource Captain has proven himself as a transmitter of high and efficient milk production, so it is no surprise to see his sons now dominating the young sire ranking. With a range of maternal bloodlines also influencing their genetic potential, these young bulls have much to offer UK producers."

"Other sire lines in the top 10 offer excellence across a range of traits, giving producers selection options to address a variety of needs, whether lifting butterfats, improving daughter fertility or cutting rates of mastitis."

Proven bulls

Genosource Captain (£874 PLI) continues at the top of the proven bull list, with an increase of £60 PLI despite the base change. As I predicted last time, he has now added



Genosource Captain still dominates the proven bull list with a PLI of £874

UK daughters to his proof – he has 492 (in 53 herds) plus many more overseas; he also has 164 in 29 herds for conformation. He is now offering 1,187kg for milk with 45.9kg of fat at +0.02% and 37.6kg of protein at -0.02%. His FeedAdvantage value is +289; the best available, and he also scores +4.6 EnviroCow and -32 maintenance. He has good scores for CalfSurvival at +2.8 along with +104 days lifespan and +5 fertility, which contributes to his HealthyCow value of £180. Persistence is exceptionally high at 73%.

Up one to second is **Westcoast River** (£778), who is also the number five-ranked autumn calving index (ACI) sire and in the top 20 for the spring calving index (SCI). He now has 329 UK daughters in 58 herds. He is an exceptionally high health trait sire, with £286 HealthyCow which includes +2.3 LamenessAdvantage, -32 SCC, -2 mastitis, +140 lifespan and +10 fertility. He is a good production sire too, with 805kg of milk, 33.4kg of fat and 30.6kg of protein with positive percentages and 72% persistency.

Up from eighth to third is **Aardema Pistolero** (£722), a good all-rounder offering 539kg of milk and with 52kg CFP and positive percentages. He has a good maintenance value of -14 with +109 FeedAdvantage, £275 HealthyCow and good values for SCC on -21.

CalfSurvival is +2.6 with lifespan days of +149 and +12.3 fertility; he ranks sixth on the SCI list. Semex also supplies the fourth-placed bull, as well as second and third, in the shape of **Winstar Greycup** (£717), who is the highest ranked newcomer.

He has a balanced proof of 588kg of milk, 40.4kg of fat at +0.19% and 27.8kg of protein at +0.09%, with a low maintenance score of -18 and values of +162 for both FeedAdvantage and HealthyCow. EnviroCow is +3.8 and LamenessAdvantage +2.2, with +7 fertility and +122 lifespan.

In fifth and dropping slightly is **FB Kenobi Targaryen** (£710), with 293 UK milking daughters in 56 herds. He is high milk with 729kg as well as 26.2kg of fat at -0.03% and 36.2kg of protein at +0.14%. He has sound, if unspectacular figures across the board, with +3.3 EnviroCow, £160 HealthyCow and -25 SCC. Lifespan is +98 days and fertility comes in at +3.1 along with 70% persistency.

Adding UK daughters (97 in 25 herds) and climbing to sixth is **Denovo 15567 Kimmel** (£706), a very high milk bull (top 15 of all proven sires) offering 969kg and 39.3kg fat at +0.01% and 35.9kg at +0.04%. This Kenobi son also has figures of £143 HealthyCow, +3.5 EnviroCow, -17 SCC, +131 lifespan and +5.5 fertility with 70% persistency.

Dropping from fourth to seventh but doubling his UK daughters to 182 is **Bomaz Kettle** (£703), another son of Kenobi. He is an A2A2 kapacasein BB bull with solid production credentials of 675kg of milk, with 45.6kg of fat at +0.21% and 34.9kg of protein at +0.14% and 66% persistency. He also has +110 FeedAdvantage and +3.7 EnviroCow; he is a small negative for fertility. New in at eight is former genomic favourite **Peak Mauney** (£701) with 166 UK daughters in 20 herds (he ranks eighth on the SCI list), offering

382kg of milk, 52kg CFP at +0.18% and +0.10%. HealthyCow is an excellent £273 with +2.1 CalfSurvival, +134 longevity, +14.3 fertility and +2.2 locomotion.

Progenesis Wimbledon (£695), second on the SCI list, has been in the proven list for a long time and he now adds another 64 UK daughters to his 32 from December. In contrast to those above him, he is a lower milk sire but with excellent components and health traits. He offers 98kg of milk and 31.7kg of fat at +0.33% and 23.6kg of protein at +0.24%, as well as a high HealthyCow value of £233 (lameness +2.1, SCC -20) and an excellent fertility index of +14.4.

Long-time genomic health specialist **Badger SSI Big Al Newman** (£695) in joint ninth makes his proven debut. Production is solid with 453kg of milk, 32.8kg of fat at +0.17% and 15.8kg of protein at +0.01%. He has -15 maintenance, +163 FeedAdvantage, £298 HealthyCow, -24 SCC, -3 mastitis, +2 CalfSurvival, +198 lifespan and +8.6 fertility. It is comforting to see his figures hold up now he is proven.

In 11th is **Winstar Graziano** (£692), another new entry into the proven ranks. He is a moderate production bull with good components: 323kg of milk, 52kg CFP at +0.32% and +0.13%. He is a low maintenance sire at -18, with +134 FeedAdvantage and £188 HealthyCow, +98 longevity and +8.9 fertility. The next batch of sires have several with UK daughters and higher reliability, including **Denovo 7899 Archer** (£691) with 1,540 UK daughters in 202 herds, **Silverridge V Einstein** (£689) with 103 UK daughters, **Topstone** (£698) with 32 daughters in milk, **Denovo 15826 Knight** (£684) with 90 in 23 herds and **Denovo 14744 Ginetta** with 324 in 45 herds. There is plenty of choice for those farmers looking for the more stable proofs of proven bulls.

"The leading proven sires demonstrate a superb balance of traits including those which will confer health, efficiency and high production on to their daughters," says Marco. "This is so important in an economic and political climate which demands a low carbon footprint and high standards of animal welfare alongside profitability, all of which are being demonstrated through the performance of actual daughters of these sires. The fact that these gains can be made through breeding is not to be overlooked, as this is the cheapest and most permanent and long-term method of making progress."



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The cogent *difference*



Renowned dairy herd doubles cow profitability in four years

An Essex dairy herd has been producing almost 14,000 litres of milk annually since implementing a herd improvement package four years ago, doubling its profitable lifetime index. British Dairying visits to learn how they have achieved this result.

The Torrance family, managers of the Curtismill herd, have been eager to accelerate the genetic progress of their herd. As part of the Genus ABS trials, they joined GENEadvance, which utilises female genomic testing to predict the genetic merit of heifers at a very young age. As such, every animal in the 700-cow herd is tested to evaluate their genetic merit.

“Doing this allows for careful selection when breeding, with the aim to breed the best cows and heifers to sexed dairy genetics, and the rest to beef,” explains John Torrance, who farms alongside his parents, and wife Lucy. “We have been seeking to improve the production of our herd by 5% annually through more accurate breeding decisions and the use of elite genetics.”

Since using the genomic testing programme, the Torrances have received customised breeding plans and support from genetic specialists to help interpret the genomic data, rank their herd, and create a breeding plan aligned to the goals they have set for their herd.

“I’ve got no issues with small cows, I love them.”

“The customised breeding plan is really helpful because it’s confusing when you have a large number of cows,” explains John. “The expertise and support provided is a big plus.”

Over the years, the family have worked closely with their Genus ABS Breeding Adviser, Colin Platten, and Genetic Services Specialist, David Guthrie, to formulate the optimum breeding strategy. As a result, the herd has seen a 99% improvement in profitable lifetime index (PLI), placing the herd at number 15 in AHDB’s top PLI herd rankings. The advancement of the herd can also be



John Torrance (R) has been working closely with Genus ABS Breeding Adviser Colin Platten (L), to optimise breeding

seen in the heifers, which are now ranking in 11th place in AHDB’s top Holstein genomic heifer herds.

To be in the top 1% of Holstein youngstock, animals need to have a PLI of over £500. Of the calves born into John’s herd in 2023, 93% of them were in the top 1% bracket. His goal of producing more milk is also proving to be a success, with 53.6% of his youngstock in the top 1% for milk production (534kg+).

Genomic testing has become a part of John’s routine on farm. Leading the process himself, he takes samples from 60 calves at a time. Once the results are back, he moves onto sampling a further 60, and operates in this cycle. The testing has allowed him to assess the performance and potential of every animal in the herd accurately. This means he can be selective with which animals he breeds from, thus boosting the genetic progress and overall profits from both milk and beef. The latest genetic review showed that the oldest

animals (in their fourth lactation) averaged just over £200 PLI, while the youngest animals averaged £600, with the last two groups of results averaging over £630.

By breeding his best performing animals to sexed semen, John can ensure the offspring will see genetic improvement when bred to an elite bull. Exclusively using Sexcel, he has no concerns over fertility and prioritises milk production for his Muller Tesco contract, which requires 4% fat.

Genetic improvements

Animals that are bred to sexed genetics see a conception rate of over 40% and pregnancy rate over 29%. “Before genomic testing and using sexed genetics, the herd had a pregnancy rate of just 18%,” says John. He believes the improvement has been down to the genetics he uses, alongside herd monitoring technology. “Production wise, we’ve never had milk like we’ve had in this

past two months.” John uses 2.1 straws of sexed semen per service and sees an average of 3% male calves, giving a 97% success rate in breeding females. With a desire for a more efficient herd, he wants to breed animals with a small frame, rather than the classic ‘show-type’ cow. “We want them as small as we can get away with and still produce the same amount of milk. I’ve got no issues with small cows, I love them. I want ‘ghosts’.”

These ‘invisible cows’ are easy-to-manage animals that require little vet intervention, reduced feed and have an easy temperament. “They’re no trouble, no maintenance, just easy,” he says. Being bred to reduce cow size, the herd now has 842 animals which rank ‘negative’ for maintenance. This reduction in size and maintenance has saved the farm thousands of pounds in feed costs.

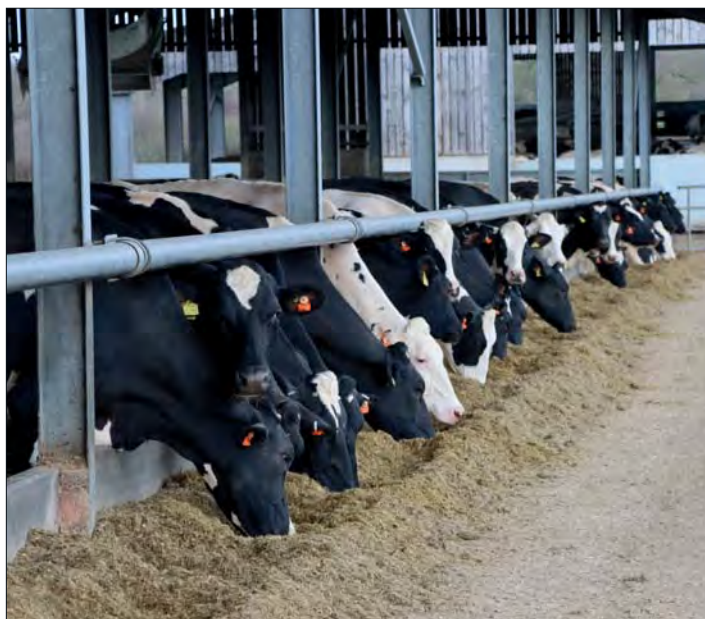
When selecting which bulls to breed from, John likes to stick to those with high PLI. “By going down

the PLI route, we have reduced our calving interval massively since 2018 and that's through the bulls we're using," he notes. He only selects sires with over 700kg of milk production, to maximise the potential of his animals.

Since being more selective with his breeding, 30% of the herd go to sexed genetics and 70% to beef. The family joined the Warrendale Wagyu beef scheme 13 months ago to guarantee the best outcome for their meat.

"Using genomics has to be a management tool."

Previously, the farm used Aberdeen Angus genetics but moved over to Wagyu to boost profits. John is impressed by the performance of the Wagyu beef animals. "They calve easier and have worked really well," he says. "Beef calves are kept for two to four weeks on the farm and are then collected and placed on a rearing farm." East Anglia is a mainly arable area with poor grass growth,



Herd production has increased by 7,000 litres/day since December 2023

so cows are typically housed, and the Torranches have made extensive efforts in cow comfort, investing in new sheds, including a 320-cow building built 10 years ago and matched again in 2018. This investment has given the cows space enough to unleash their genetic potential. "When moving from their

old shed, to the new state-of-the-art facility, production increased by 2,000 litres overnight," notes John. He puts this down to the cows having more space and therefore being more comfortable. To take cow comfort to the next level, he provides sand beds for all the animals. "Sand has revolutionised everything, including

mastitis," explains John. "We still get some cases, but nothing like what they were. We have fewer than six cases per 100 cows now, and we haven't treated a cow with antibiotics for mastitis since 2018." So what of the future? With cow numbers hitting 700 plus 600 followers, the family aims to maintain herd size and are prioritising production.

"They [Wagyu] calve easier and have worked really well."

"We are currently selling 13,700 litres of milk/cow, but we are aiming to hit the 14,000 mark in just a couple of months," says John. Since December 2023, herd production has increased by 7,000 litres/day at 47 litres/cow. "Using genomics has to be a management tool," he notes. "There's no point doing it and not using the data – it is key to accelerating your herd's genetic progress, gaining insight you can't see with just your eyes."

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Under-sowing can pay dividends

Under-sowing maize with a hybrid ryegrass and red clover ley has delivered multiple benefits including high yields for one Cornish dairy farmer, as British Dairying reports.

Chris Sampson has been under-sowing maize for the past five years, and can list extra forage, increased soil carbon and reduced cultivations among the key advantages of this practice.

He is also eligible for a countryside stewardship payment of £172/ha for what is effectively a cover crop. And all of this is achieved with no detriment to his primary goal of growing high energy maize. “We grow around 16ha of maize each year, which makes up about half of the winter forage ration for the milking herd,” Chris explains.

“We now routinely under-sow it with a grass and clover mix, with the additional stewardship payment more or less paying for the seed. And, with the extra first cut of grass and clover silage we take the following spring, I’d say the whole exercise pays for itself in the first year.”

High-energy crop rotation

Maize was first grown at Metha Farm, near Newquay, around 25 years ago, and is now a mainstay of the milking ration for the 112-cow herd of Holstein Friesians. It is grown in rotation with grass and clover leys, with Chris favouring very early varieties that will produce a mature, high-energy crop in a relatively short growing season.

“We’ve tried growing wholecrop cereals as an alternative to maize, but could never achieve the same yield,” he adds. “It’s about maximising energy



Chris Sampson has been under-sowing maize, achieving a mature high-energy crop in a short growing season

production, and the best measure of that is mega joules per hectare. With the system we now have, we’re able to exploit the full benefits of high-energy maize while overcoming any environmental concerns with the crop.”

Grass and clover leys at Metha Farm are typically down for three or

four years before going into maize. The policy is usually to take a first cut from the old ley in early May before applying farmyard manure and then preparing the ground to drill maize. “Our oldest leys are often still quite productive, and we’ll top-dress with nitrogen before taking a first cut,” explains Chris. “Once that crop is off, we have a fairly tight turnaround to spray off the aftermath and apply muck before ploughing and preparing a seedbed.

Late May drilling target

“We find the right time to drill maize is at the end of May, or even the first week of June. We’ve tried drilling earlier, but it’s usually better to wait until soil temperatures are higher. Even with the relatively late drilling we usually have a crop that hits the target of ‘knee high by the fourth of July.’”

Chris routinely soil samples all of the land going into maize, with the results determining his fertiliser policy for the crop. He may use up to 124kg/ha of diammonium phosphate (DAP) in the seedbed, and low-level applications of nitrogen and/

or mono-ammonium phosphate (MAP). Or he may decide there’s no requirement at all, adhering strictly to a principle of only applying what is necessary.

“The mix of hybrid ryegrass and red clover works best.”

Once weeds have been sprayed off, and with the maize crop up to 12 inches high, Chris goes in with his Weaving inter-row drill, sowing a hybrid ryegrass and red clover mix at a regular seed rate of 35kg/ha.

“It’s a disc drill system and the coulters can be set to drill between the rows of maize,” says Chris. “The mix of hybrid ryegrass and red clover works best for our situation. The establishment is effective, so when the maize comes off in the autumn, there’s a wispy crop growing underneath that kicks on very quickly.”



Wholecrop cereals never achieved the same yield as maize at Metha Farm



Limagrain's Tim Richmond

The priority for Chris is a mature crop of maize, so he resists the pressure to cut earlier and waits until the cobs are fit. In 2023, the maize came off on October 8, with an overall fresh weight yield of around 43t/ha at 35.8% dry matter.

This winter it fed well, contributing a significant proportion to the total mixed ration for cows averaging 7,500 litres/lactation.

Benefits of under-sowing maize

The principal benefit of under-sowing maize with a secondary crop like ryegrass, clover, or vetch – or a combination of all three – is that it prevents maize stubbles from sitting bare over the winter.

“This not only reduces nutrient losses and soil erosion caused by run-off, but also makes travelling at harvest and in the subsequent spring easier, with the secondary crop helping to improve and bind soil structure,” says Tim Richmond, Sales Manager at Limagrain.

“The under-sown crop also provides a valuable winter or spring crop for livestock to graze, as well as providing a home for slurry to be spread in the early spring. Under-sowing also helps to improve soil biology, with worm counts typically six or seven times higher compared with bare maize stubbles,” he adds.

“The secondary crop will also provide competition against spring-germinating weeds, and, if conditions turn too wet to drill the next year’s crop, the land will still have a useful grass crop instead of sitting bare for a second winter.”

So what maize varieties to grow? “Gema, Dignity, Saxon and Skipper are ideally suited for under-sowing as they are early maturing, which allows the cover crop to become further established after an early maize harvest, yet still go on to deliver a yield on par with the top performing varieties,” says Tim.

“To achieve the best levels of cover crop establishment, the secondary crop should be drilled at a rate of around 15kg/ha (depending on the species and mixture) when the maize is at the four to five leaf stage,” he advises.

“Avoid drilling the cover crop too late, as an overly developed maize canopy will prevent the secondary crop from establishing properly. And ensure a gap of 15cm is left between the cover crop and maize drill rows to prevent any detrimental competition effect on maize yields.”



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Innovative design for Claas loaders

Claas has launched a new generation of front loaders with improved comfort and performance features to replace the previous FL C series, with integrated mechanical self-levelling linkage.

The six new models, from FL 40 C to FL 140, cover lift capacities from 940kg to 2,490kg and a breakaway force from 1,820kg to 3,120kg. Maximum lift heights at the bucket pivot point range from 3.5m to 4.5m.

The new loaders feature a new, innovative three-section design, with a double-angled boom that shifts the pivot point mechanism down by more than 20cm. This gives the operator a better view of the frame and attachment, especially as the front crossbeam has been lowered by 10cm.

The familiar Fitlock coupling system has been retained. The locking



mechanism is fully automatic and entirely mechanical. With the Mach multi-coupling system, all hydraulic and electrical lines can be connected to the tractor in an instant, making the job of attaching the front loader fast and safe.

With the optional hydraulic Fastlock system, attachments can be locked at the press of a button from the cab, in addition to

automatic mechanical locking. Third and fourth functions can be connected via the Mach 2 multi-coupler, which features leak-free, flat-seal couplings.

The automatic bucket return function automatically returns the bucket to the horizontal loading position, while optional LED work lights illuminate the loading area in the dark. www.claas.uk.

Live yeast cuts milk carbon footprint by 5%

Following rigorous testing, Actisaf Sc 47 live yeast from Phileo by Lesaffre has been shown to reduce CO₂e per kg milk by 5%. The test involved a full life-cycle assessment and the results were independently reviewed under the ISO (14040/44) standard.

The probiotic achieves this by altering the rumen environment to support growth of lactic acid-utilising bacteria and microbial species which aid fibre digestibility. This stabilises rumen pH and improves feed conversion efficiency by 4.5%, resulting in an extra 2.8kg of energy corrected milk per cow/day, with no increase in feed intakes or negative impacts on health or body condition.

Phileo claims it has a return on investment of 8:1, costing about £15/cow per year. www.phileo-lesaffre.com.

Post-calving rehydration drink for the Irish market



Premier Nutrition has launched Restart, a scientifically advanced post-calving rehydration drink, into the Irish market.

Restart contains a blend of key nutrients, antioxidants, glucose precursors and selected yeasts to feed and condition the rumen microbiome, help support a healthy immune system and give the cow the best start after calving.

Its highly soluble, quick-release calcium propionate source gives the cow more available calcium, rather than calcium carbonate which is commonly used in other products.

"After calving, the cow's demand for calcium increases significantly due to colostrum and milk production," explains the firm's Lorna Power. "If that demand is not met, the

risk of metritis increases by 3.2 times and milk fever by 2.4 times; both hugely detrimental to cow health and milk production for the entire next lactation."

The calcium propionate is supported by extra high levels of magnesium, essential for the absorption and mobilisation of calcium at this crucial time. Magnesium is also important in switching on appetite and encouraging feed intake after calving.

Restart also includes a B-vitamin complex with protected selenium and vitamin E to assist immune response. Sugars provide an energy boost while hydrolysed and live yeast support the rumen microbiome and stimulate dry matter intake.

www.premiernutrition.co.uk.

IoT thermal technology

A new solar-powered water heating system will help dairy farmers to cut energy costs and reduce consumption, using the 'internet of things' (IoT) technology. Glasgow-based solar tech specialist, Soltropy, has developed a smart monitoring method for its water heating system through the Milk Round accelerator hosted by CENSIS, Scotland's innovation centre. The initiative is part of the Digital Dairy Chain.

Hot water is essential for dairy farm sanitation, but traditional water heating methods are expensive to run. In contrast, this roof-installed system uses solar energy to provide hot water on demand, saving farmers up to £6,000/year on energy bills.

Soltropy's heat-generating panels are three times more efficient than photovoltaic panels, which convert sunlight to electricity. And, unlike



Stuart Martin, Soltropy

other solar thermal systems, these need less maintenance and do not require antifreeze. The technology, which can be retrofitted to existing systems, features IoT-connected solar tubes to enable remote monitoring, with data collected helping farmers to monitor performance and predict when maintenance is required.

Automated alerts highlight errors and necessary repairs. www.soltropy.com.

Ketosis risk alert tool

Uniform-Agri has unveiled a new ketosis risk alert tool as part of an updated software package. Farmers can identify 'at-risk' cows depending on factors including parity, previous long dry periods, history of energy-related diseases, yield in previous lactations and length of calving intervals.

The programme can generate a list of high-risk cows between 28- and 18-days pre-calving, helping producers to prevent the disease before it takes hold. www.uniform-agri.com.

Shepherds Purse

Award-winning artisan Yorkshire cheesemaker, Shepherds Purse, has partnered with Acorn Organic Dairy to bring Organic Yorkshire Blue to the market. It uses organic milk from pasture-grazed cows in Yorkshire and the Durham Dales.

Organic versions of its other cow's milk cheeses will follow, creating a full organic range.

This will be the family-owned dairy's first organic cheese, and is available now from wholesalers and online. www.shepherdspurse.co.uk.

New Kumm slurry tanker demonstrations available

J Riley Agri, sole UK importer of the premium Kumm Technik slurry tanker range, is demonstrating the Kumm KTR 20.5m³ twin-axle tanker equipped with a Bomech Farmer 15-m trailing shoe applicator around the UK.

The tanker's specification includes a four-tonne capacity adjustable drawbar, air suspension and Michelin 800/60R32 tyres with central tyre inflation. The tanker has two chambers, with the rear compartment emptied in the field first so maintaining weight transfer to the drawbar. This feature comes into

its own when working on undulating ground. Air can be released from the front axle suspension system for 90 seconds to transfer more weight onto the tractor.

The KTR features a double-hinged 8" filling arm which can be adapted to fill from a tanker docking station or lagoon. The macerator and stone-trap are mounted ahead of the 9,000 litre/min pump and the application rate is controlled via the Kumm touchscreen display. The tanker is also Isobus compatible.

To book your demonstration call Sion Williams on 07919 214788.



New temporary slurry stores



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They can be fitted with single or multiple ports, can be covered with a floating Hexa-Cover or fixed cover, and have a 10-year warranty. The slurry or digestate can be mixed using a hydraulic mixer over the side or agitated using a pump.

"The new stores lend themselves to a number of possible scenarios," explains Tramsread's James Peachey. "We envisage them being popular as satellite or supplementary stores, perhaps to service an outlying block of land or rented ground where a permanent store isn't always appropriate." www.tramsread.co.uk

Tramsread has introduced a new range of quick-install temporary slurry stores. The zinc-coated steel tanks have a durable Landflex Elvaloy lining and come in capacities from 280m³ to 1250m³. Eliminating the need to pour a concrete base, the tanks use a compacted earth base

Portasol 111 gas dehorner now back in stock

Dairymac has announced that the Portasol 111 gas calf dehorner, and full range of spares, is back in stock after two years' absence caused by a fire at the factory in Ireland. The popular dehorning iron is designed to disbud a calf horn in seconds at 650°C, and is simple to operate and maintain. www.dairymac.com



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Wales: Rolling with the punches



Abi Reader

Political comment

Just when it was beginning to feel like things couldn't get any worse for farmers in Wales, the punches just keep on coming. We've got the Nitrate Vulnerable Zone (NVZ) regulations being phased in across 100% of Wales with very little financial backing and, based on the last six months of rainfall, they appear to be out of touch with the situation farmers face on the ground.

Then we have the bovine TB eradication policy, which seems to do anything but eradicate. Also in the running is an interim environmental scheme to fill the gap until the new Sustainable Farming Scheme (SFS) comes online. Then of course there's the SFS itself, or at least the final consultation for it. Almost 100 pages covering the detail of what may come to pass with requirements for 10% trees, 10% habitat, measurable biodiversity outcomes, ponds and scrapes - answers on a postcard if you can identify a scrape - and don't get too excited, I doubt it involves slurry. Data capture is to be 'made available to Welsh Government on request', online 'learning' demands, the list goes on...

"It should come as no surprise that this was coming to a head."

It was fairly obvious this was going to be quite expensive, but with no financial information available farmers will need a crystal ball to produce a cash flow forecast. The key question is where does that leave farmers in terms of support for business resilience, productivity and innovation? It beggars belief that there is this concept that all farms need to do is 'up their

game' by completing some compulsory webinars on body condition scoring and mobility, and all the problems they face will be resolved. Farmers complete CPD frequently, just not necessarily in the traditional format recognised by other businesses. They monitor the markets daily, they plan by the weather, they gamble with the weather, they manage infinite external threats and jump on any opportunities.

Plenty of warning shots

So with all of this, and more, going on it really should have come as no surprise to the Welsh Government that this was coming to a head, much the same as a fresh-calved heifer getting ready for the double-barrel kick in the parlour. There were plenty of warning shots, with meetings at livestock markets and local tractor runs happening right across Wales. But far from responding accordingly to this growing unrest, there followed a swathe of derogatory comments from the Senedd, including from the then First Minister Mark Drakeford.

We all know what happens when you start shouting at the angry heifer. What ensued was the largest protest in the Senedd's 20-year history, with over 3,000 farmers on the Senedd doorstep with banners, flags, posters, media and an incredibly well-organised demonstration of unrest.

Seven days later this was followed by a further protest of striking contrast by NFU Cymru members, with a display of 5,500 used wellies on the steps of the Senedd. The wellies were collected from every county in Wales and lined up side-by-side to illustrate the potential job losses from the new SFS scheme projected by Welsh Government's own impact assessment. Silent, determined sentiment needing no words or gimmicks.

Cabinet reshuffle and re-alignment

So where now? There is perhaps some light at the end of the tunnel. First Minister Mark Drakeford has now stepped down and his successor, Vaughan Gething, takes over. This has been accompanied by a cabinet reshuffle and realignment of portfolios, meaning there is also a new Cabinet Secretary for Climate Change and Rural Affairs - Huw

Irranca-Davies. This could be a chance to hit the refresh button.

Officeholders at NFU Cymru met with both politicians early into their new roles; in fact they both told us we were the first external stakeholders they had met in their terms of office. So let's take that as a good sign that agriculture is at the top of the agenda.

Both showed a keen desire to improve relations and listen to the concerns of Welsh farmers. The First Minister also reminded us he was a farmer's son; his mother had been a chicken farmer in Zambia, and his father had been a vet in South Wales, and later in Dorset. He said he hoped this gave him a good grasp of the issues farmers face. We hope so too.

Mr Irranca-Davies expressed how pleased he was to get this role, and with experience as a Defra Minister when he was an MP, fingers crossed he doesn't have too steep a learning curve.

"It's highly unlikely all the unrest is suddenly going to disappear because of a change at the top."

The next couple of months for the Welsh Government will be taken up analysing over 12,000 responses - many from Welsh farmers - to the SFS consultation. During this time, it's crucial we don't take our foot off the gas in terms of keeping the issues surrounding this scheme, and the many wider issues, prevalent.

Our meetings and events will continue happening across the country involving Members of the Senedd, stakeholders and farmers. It's highly unlikely all the unrest is suddenly going to disappear because of a change at the top.

There are many deep-rooted issues within Welsh farming that are going to take time, will and empathy to sort out. I sincerely hope the ambition is there to do it.

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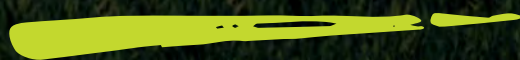
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* Two lactations or greater.

Reference 1. McArt and Oetzel. A stochastic estimate of the economic impact of oral calcium supplementation in postparturient dairy cows. J Dairy Sci. 2015 Oct;98:7408-18.

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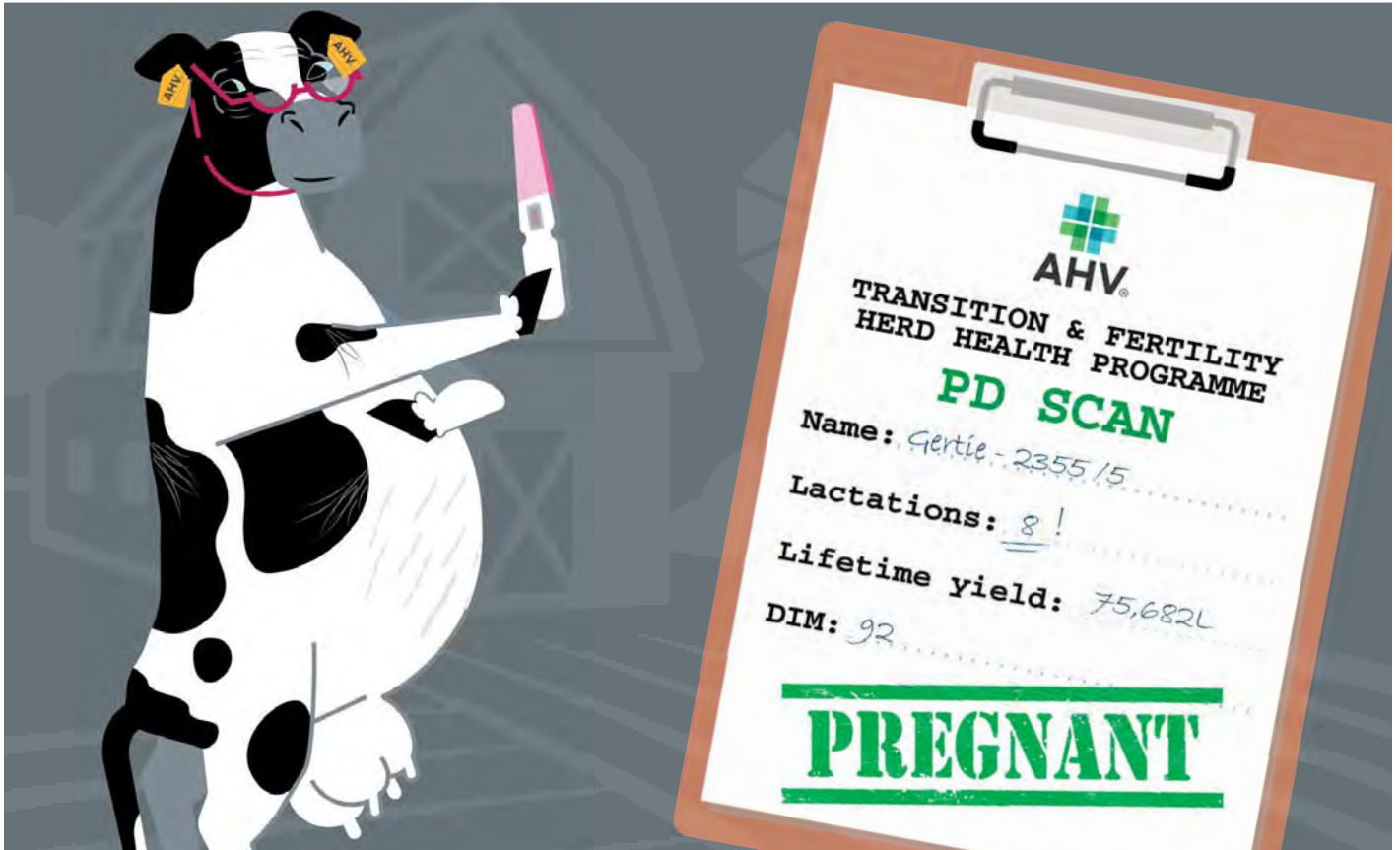
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Increasing fertility with ‘intelligence’

The Fertility supplement for Spring 2024 is packed full of product and farm case studies from companies whose business it is to help dairy farmers improve the health of your herd. “Fertility is the key driver of efficiency and profit in dairy herds,” says Sarah Alderton on pages 4-7, as she reviews some of the Cream Awards entrants and their tactics to improve fertility. “It is also a focus area for dairy farmers in helping drive down a farm’s carbon footprint. Every day added to a cow’s calving interval pushes back her next lactation, meaning she is producing less milk, pushing up the amount of methane per litre.”

On page 14 we hear from Rob Horn from Neogen on the subject of BVD which “remains a problem in many UK dairy herds, having a negative impact on fertility which in turn compromises production and longevity. BVD has been estimated to cost £25- 61 million (AHDB) in Great Britain, so eradication represents a big opportunity to reduce costs and improve efficiency and welfare,” he comments.

Managing increased cow numbers with the same level of staff can put constraints on herd fertility rates. One of AHDB’s Strategic Dairy Farms is addressing this challenge – read more about Potstown Farm in Lockerbie - who’s multi-pronged approach has seen a 10% increase in pregnancy rate – on page 22-23.

There are lots of tools out there to assist farmers. These include SmaXtec’s unique bolus system which monitors parameters including cow activity, rumination, water intake and body temperature to allow farmers to make informed and proactive decisions on herd health and fertility... read more on page 24.

Managing Body Condition Score, vet Georgia Thresh, Technical vet at 3D imagery company HerdVision reports: “On many farms the challenge has been condition scoring cows often enough and with a high enough degree of precision and consistently, both of which can be overcome with technology... By analysing the data, it was possible to assess the consequences of cows calving at different BCS on subsequent calving to conception interval,” read more on page 30.



Read the case studies, product news and comments from our contributors - and we hope you find this edition useful.

Caroline Calder
Editor

“Before we started, our pregnancy rate was around 18-19%, and the calving index was never over 400 days. The figures were not bad, but I just wanted to get better.” After using the service, his heat detection rate increased to 66% and the pregnancy rate to 30%

Kenny Campbell, Slagshaw Farm, Castle Douglas, page 6.

Caroline Calder is Editor of the weekly e-newsletter for British Dairying magazine, Organiser of the Cream Awards – Dairy Industry Trade Awards and a Director of WB Publishing.

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“For anyone concerned about their herd’s fertility, we advise breeders to use bulls with a Fertility Index which is higher than the average FI of their youngstock, which they can find on their Herd Genetic Report (HGR)”

Marco Winters, AHBD Dairy comments on page 13.

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Driving up fertility is helping to push down emissions

Sarah Alderton looks back at our past Cream Award entries to gather some top tips on what is aiding fertility across these farms.

Fertility is the key driver of efficiency and profit in dairy herds. It is also a focus area for dairy farmers in helping drive down a farm's carbon footprint. Every day added to a cow's calving interval pushes back her next lactation, meaning she is producing less milk, pushing up the amount of methane per litre.

Good fertility is dependent on factors such as:

- Genetics
- Nutrition and mineral balance
- Health status and disease
- Accurate heat detection and fertility aids
- Successful transition period
- Dry cow management
- Getting heifers in calf by 24 months

KPI's for good fertility in an all-year-round-calving herd include:

- Age at first calving 22-24 months
- Heat detection rate >70%
- Conception rate 50-55%
- Pregnancy rate (heat detection rate x conception rate) >20%
- Calving to conception interval 85-95 days
- Calving interval 365-375 days
- 100 day in calf rate >65%
- 200 day not in calf rate <6%

Getting heifers in calf by 24 months is critical and significantly influences the farm's carbon footprint. Heifers hitting target calving age tend to be more productive and have improved lifetime fertility compared to older calving heifers. This is a topic that was discussed in our Youngstock Special in February.

Once heifers have entered the milking herd, maintaining fertility is essential, and that rests with managing the dry cow and having a successful transition period in place.

In past Cream Awards entries, our High Performance and Fertility awards entrants have stressed the importance of the transition period in getting cows back in calf.

Dry cows and transition

Ben Williams, Higher Hampton Farm, Axminster, puts great emphasis on nutrition in the transition stage and



“To help energy levels and allow cows to milk and return to oestrus, concentrates are gradually increased from 5kg a day to 8kg a day”

early lactation in the ability of cows to get back in calf.

He milks his 265-cow herd through four Lely robots, each containing an in-built weigh platform that automatically weighs animals at each milking. He recognises that cows generally lose a small amount of weight in the first 21-30 days post-calving, but at 30 days, it is expected to flatline, and by 30-40 days, they should start gaining weight. “Once they're gaining weight, they're OK to serve. If they're losing weight at 40 days, it's a waste of time serving them,” explains Williams.

To help energy levels and allow cows to milk and return to oestrus, concentrates are gradually increased from 5kg a day to 8kg a day. Once at 50kg of milk, cows receive up to 11kg a day. This is fed

alongside a maize, grass, straw, Wessex Gold, yeast and meal diet at the feed fence rationed for Maintenance plus 26 litres. Propylene glycol is also delivered through the robot for the first 28 days to help energy levels.

Ben Williams believes providing a transition diet with just the right amount of energy-125 MJ of energy a day - also ensures these high yielders get off to a good start. He works closely with his nutritionist and vet to ensure nutrition and animal health are the best they can be.

Body condition

A cow losing body condition in early lactation is harder to get back in calf. The target is for cows to lose no more than half a condition score unit from calving to breeding. Importantly, they should not drop below a BCS of 2.0. If cows are over-conditioned at calving, the risk of milk fever and calving difficulties also increases.

Cows should be dried off in condition 2.5-3 and should maintain that until calving. Any nutritional deficiencies or changes in body condition in the last three weeks before calving could increase their risk of transition diseases, such as ketosis and hypocalcaemia, and ultimately delay oestrus and the ability of that animal to get back in calf.

Chris Dunn, Higher Farm, Somerset, emphasises the correct body condition of cows in the transition period. He adjusts the diet accordingly to ensure there are no problems.

Target body condition scores are:

- At calving - 2.5 – 3.0,
- 60 days post-calving - 2.0 – 2.5
- 100 days before dry off - 2.5 – 3.0
- At dry off - 2.5 – 3.0

Herd Manager James Major at Hole Farm, Egloskerry, Cornwall, also notes the importance of correct body condition on the ability of cows to get back in calf. "Body condition is very important for fertility. If they're too lean, they'll be working too hard. If they're too fat, they're lazy," he says.

Metabolic diseases

Metabolic diseases can also delay a cow getting back in calf. Dairy farmer **Gary Hawker, Clandon Farm, Dorset**, takes great care to ensure cows have the right mineral balance by conducting a routine mineral analysis of all the forages fed on the farm. This includes grass silage, maize and hybrid rye.

He says: "The more information you've got, the more decisions you can make." A bespoke mineral blend is then formulated depending on forage analysis results and how the cows look. He also records the fine details at calving, including any animal that has a difficult calving or presents with a metabolic issue. This is then used to inform which animals he retains in his herd.

As copper deficiency can cause fertility issues, and Gary Hawker's farm is known to be high in molybdenum which can lock up copper, copper is included in the mineral. Iodised rock salt is also provided ad lib. This is particularly important when cows are out-wintered on turnips, which are low in iodine.

A correct, balanced fertiliser that complements soil analysis results is also applied to grassland immediately after cows leave the field. Hawker says this ensures there's enough time for the plant to take up nitrogen before the cow's return, which avoids any associated negative fertility problems.

Metabolic profiling can be used to assess nutritional status and identify areas for improvement in nutrition to benefit calving performance and subsequent fertility. It involves taking blood samples from groups of cows and providing information on the level of protein, energy, and mineral status. Farmers use the results to help tailor individual cow feed requirements.

However, ensuring cows are in correct body condition and provided with the best nutrition is only half the answer to getting cows back in calf. Management of these animals, particularly when it comes to detecting heat and using the correct genetics, plays a massive part.



Will Dodd, Dodleston Hall, Chester, also praises the Lely Horizon app for highlighting any potential health issues and heats early

Heat Detection

Getting cows back in calf relies on accurate heat detection. Fertility aids are commonly used to improve detection and over the past decade, technology in this area has massively advanced, with many farmers now using automated systems, such as pedometers, activity collars and cameras to identify when cows are coming on heat.

Mark and Carol Davies, New House Farm, Haverfordwest, are reaping the benefits from such technology by gathering invaluable real-time data on cow health and activity. They milk 250 cows through four Lely robots. They use the Lely Horizon app to give them an insight into heat detection, rumination, milk conductivity and temperature, as well but-terfat and protein. Horizon allows them to detect heats earlier and react promptly.

Will Dodd, Dodleston Hall, Chester, also praises the Lely Horizon app for highlighting any potential health issues and heats early.

He says the app has been a 'game-changer' in the day-to-day management of his family's 280-cow herd in Cheshire.

The live data is aiding faster detection of sick animals through its rumination, temperature and activity monitoring and has also high-lighted calving difficulties.

Another key feature of the app is a Cow Index, which ranks each cow based on production, reproduction, health and robot efficiency. The herd is then given a total index with animals individually ranked above or below 100. Cows in the second lactation or above that rank within the bottom 12.5% are highlighted to keep open with a view to culling these poor performers.

However, there are other ways to achieve accurate and timely heat detection. **Simon and Fiona Madge from Manor Farm, Ilminster, Somerset**, use a team approach. They say heat detection is central to any successful fertility strategy. The farm is very strict about identifying heats

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Cows are milked through six Lely robots at Dodleston Hall

not only when cows are eligible but also before they become eligible for service. The voluntary waiting period has been reduced to 42 days, and cows are holding at this stage.

The farm places significant emphasis on accurate records that are accessible to all members of the farming team. Interherd and Interherd Plus are used to provide alerts for cows predicted to come bulling and the vet inspects records at every visit. 93% of cows are served by 100 days, while 65% become pregnant by 100 days.

James Major also has good heat detection, admitting his team are “pretty anal” when it comes to heat detection. Everyone has a notebook to record cows seen bulling, whilst a Whatsapp group enables the team to take a photo of a freeze brand so Major knows which cows to check. Tail paint is used for heat detection, with orange tail tape also being put on any cow seen bulling, making it easier to pull out for service.

Kenny Campbell, Slagshaw Farm, Castle Douglas, employ the services of Cogent for their walk-and-chalk service as part of the Precision-REPRO package. “Before we started, our pregnancy rate was around 18-19%, and the calving index was never over 400 days,” he says. “The figures were not bad, but I just wanted to get better.” After using the service, his heat detection rate increased to 66% and the pregnancy rate to 30%.

Ben Williams says providing correct conditions for cows to express bulling behaviour is important. He installed fans in his shed, which aided fertility. “If cows are over stressed, they won’t show

“Before we started, our pregnancy rate was around 18-19%, and the calving index was never over 400 days”

physical bulling signs as they’re putting all of their energy into getting their temperature down. And cows are very lazy. Once they’re stressed, they lie down and don’t eat so they don’t have the energy to come bulling,” he explains.

Genetics

Once cows are in heat, decisions on genetics, what bulls to use, and which cows and heifers to retain for breeding are paramount. These decisions dictate the future of the herd.

Kenny Campbell stopped using conventional semen in 2019 and now uses Sexed ULTRA 4M, the Cogent product with twice the number of female sperm cells per straw.

He now breeds around 85% of his dairy heifers and 15% of his cows to sexed female dairy semen, only aiming to produce the number of heifers he requires for his own dairy replacements. He uses genomics to identify the top animals to breed from and eliminate any genetic defects from the herd. The

best genomic bulls are then matched to the females for ultimate genetic gain.

The rest of the animals are bred to high genetic merit Aberdeen Angus bulls, which has lifted the market price for his calves.

Paul Eggleston, Bridge Farm, Long Clawson, has shifted from an all-year-round calving, high-yielding system to a spring block calving, grass-centric one. This has not only forced him to change management practices but also facilitated a complete fertility mindset change. He admits that this mindset change is still evolving. However, over the last 15 or so years, he has made big gains in herd fertility by placing particular emphasis on using high-fertility bulls, breeding from the most fertile females, and being regimental with heat detection.

Paul only breeds replacements from the most fertile cows, admitting they had fallen into the trap of “breeding for infertility” by giving cows numerous chances to get pregnant. Now, dairy semen is only used to serve cows at the start of the block, meaning replacements are only produced from the most fertile animals.

Mark Broad, at Manor Farm, Devizes, breeds cows to a strategy of sexed semen and beef and has been using Genus ABS Reproductive Management Services (RMS) for the last five years. Moving to sexed semen has increased the number of heifers in the pipeline. Mark says: “Previously, we had been holding onto cows a bit longer but will now be able to cull poorer cows, including poorer mastitis cows and

slower milkers. We will also benefit from better genetics coming in.”

Mark has also genomically tested the herd, allowing more accurate sire matching. The breeding programme has been developed with the objective of improving udder characteristics including teat placement and teat length with all sires used being negative for somatic cell count. Emphasis is also placed on milking speed and temperament.

Accurate records are important when selecting which animals to breed from. While technology is aiding that, the data must be used carefully. Types of data that can help include:

For dairy farmers, reducing emissions doesn't necessarily require drastic changes and huge investment. It all comes down to improving the production efficiency by producing more from less, having less unproductive animals



Accurate records are important when selecting which animals to breed from. While technology is aiding that, the data must be used carefully. Types of data that can help include:

- Calving difficulties
- Difficulties getting in calf
- Health status and any disease issues
- Production

on the farm by focusing on things like calving interval and calving in at two years old, which all rest on having good fertility in the herd.

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Accurate semen analysis for improved conception rates

Dynescan semen analyser enables vets to provide fast and accurate fertility results



Tom Oxtoby

For many dairy farmers, semen analysis is a reactive exercise following lower-than-expected conception rates, often when the business has already incurred costs. Now, a portable system developed to boost conception rates and improve herd efficiency is already making a difference for dairy farmers.

Dynescan, which was invented and is made in the UK, is a fully portable semen analyser and delivers automated, precise measurements of semen motility. The technology was developed by the team at Dyneval, at the Roslin Innovation Centre, Edinburgh, and has already won many industry awards since its launch, including the Silver Award for Agri-Tech Innovator of the Year at the British Farming Awards 2023, and highly commended in the Cream Awards Innovation Award 2023.

Tom Oxtoby, farm vet and Director at The George Farm Vets throughout Wiltshire and Gloucestershire has been using Dynescan for three breeding seasons, having invested in the system to broaden the service offered to customers and improve their accuracy of semen analysis.

"We have always spent a lot of time looking at conception rates, particularly amongst the large dairy and beef herds we work with, and the various factors that influence success in this area," he explains.

"So when I first heard about Dynescan, I was interested in trying it out, and I believe that our service for farmers has greatly improved."

Removing subjectivity

While most vets and breeding technicians are comfortable examining semen samples taken from bulls or AI straws under a microscope, this traditional analysis is subjective and relies on the trained eye looking down the microscope.

"I was aware of the limitations of visual observation, and since using Dynescan, I've realised how much more can be discovered from the reports it generates," he admits.



Dynescan, the first technology capable of monitoring semen motility in warm, low-oxygen conditions similar to the reproductive tract.

"I was aware of the limitations of visual observation, and since using Dynescan, I've realised how much more can be discovered from the reports it generates"

"Using Dynescan has removed the human element, which gives the variation and subjectivity, and devised a way to analyse multiple samples and give repeatable, reliable, evidence-based results with confidence."

In continuous measurement mode, the equipment collects data at regular intervals over two hours. This detailed report helps strengthen the understanding of long-term motility, or sustained motility lifetime (SML),

in low-oxygen conditions similar to the reproductive tract, which is key to performance and conception rates. Dynescan is the only semen analyser capable of measuring the sustained motility lifetime (SML) of a semen sample, bringing lab-quality results and precision to the farm.

Improving herd performance

"Fertility efficiencies are the foundation of an efficient farm, and it's important for me to help farmers be proactive and understand the effect semen performance can have on productivity and profit margins when breeding replacements for the herd."

Tom mainly provides continuous assessments to dairy farmers using AI, testing straw samples stored on-farm. Although the portable equipment can be used anywhere where mains power is available, Tom mostly uses it in his veterinary practices and processes multiple samples in continuous mode.

While semen straws purchased from genetics companies are rigorously quality tested at the point of production, they are highly sensitive, and what happens between them leaving the lab and on-farm insemination can have a huge impact on the fertility or performance of individual straws.



Dynescan can be used anywhere where mains power is available, making it suitable for use on-farm.

“Proper storage and handling of AI straws is key, and all sorts of things can and do go wrong in transport, with storage, temperature, etc.” says Tom.

“This is often where mistakes are made – farmers assume that because the straw claims to contain 4 million sperm cells, that is what the straw will definitely provide. However, this may not be the case due to an issue somewhere down the line. Or it may be accurate, and analysis will show good motility, confirming that their storage and handling practices are up to scratch.”

“Our job as vets and advisors is to add value to our customers’ businesses and support conception rate targets”

Precision and data

“For most, it’s about data, precision, and peace of mind, being proactive in their breeding strategy and herd planning, while it can reveal the shortfalls for others. One customer calculated a loss of £12,000 due to fertility issues,” he adds.

For those seeking precision, Tom says the uptake of more detailed analysis has been popular. He adds that it could be useful for those monitoring carbon footprints due to milk contract requirements; closely linked to efficiency, the carbon footprint can be significantly improved with better conception rates, demonstrating financial and physical wins for dairy businesses.

“Our job as vets and advisors is to add value to our customers’ businesses and support conception rate targets – a conception rate increase of just a few percent can add up to substantial financial gains across the herd,” says Tom.

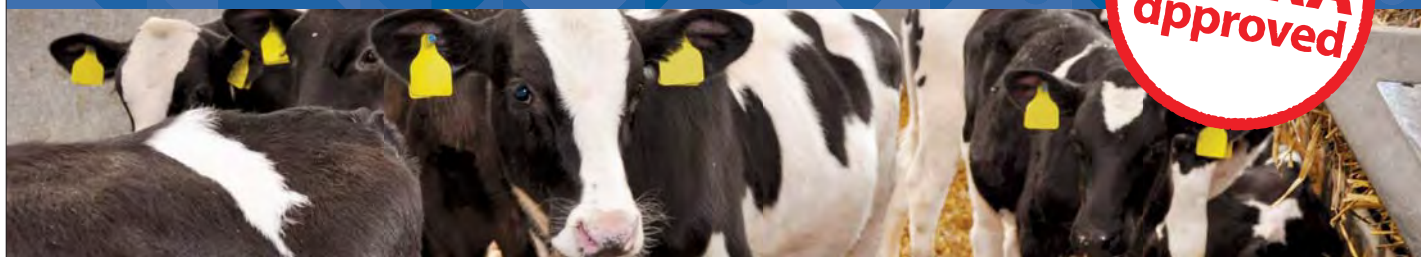
“There is a thirst for knowledge and solid data surrounding semen quality, and I believe it will grow. Buy-in within the industry will help us as vets, but mostly farmers, to use precision semen analysis effectively and for it to become the norm,” he concludes.

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Increasing conception rates as herd

Managing increased cow numbers with the same level of staff can put constraints on herd fertility rates. Addressing this challenge has been a key focus for Potstown Farm in Lockerbie who's multi-pronged approach has seen a 10% increase in pregnancy rate.

The Owen family manage Potstown Farm, home to an all-year-round calving herd of pedigree Holsteins and Jersey cows. Starting with just 90 Holsteins and 177 acres in 1988, the family have been gradually increasing the size of both the herd and the farm ever since.

Today, the family farms over 350 acres and have recently invested in a new cubicle shed as well as two additional robots. Four years ago, they decided to change half the herd to Jerseys and today cow numbers stand at 255 with almost 340 followers.

The herd average annual yield is around 9,000 litres with a recent increase in butterfat of 5.3% compared with 4.09% butterfat previously. The team are hopeful that they will maintain the butterfat levels over the coming months.

Sexed semen is used exclusively on cows and heifers with beef semen used on second or third service. Bull selection is done on a mainly £PLI basis although milk yield, butterfat percentage, type merit, legs and feet and fertility are used as well along with teat length and placement for robotic milking.

Gareth uses his AHDB Herd Genetic Report to make his breeding decisions and is always keen to maintain the herds position within the top 5% percentile on the national average report.

Doreen Anderson, Senior Dairy Knowledge Exchange Manager at



Brothers Gareth and David Owen stood at the feed face in the milking shed

“Improving fertility gives you flexibility to better manage your dairy farm and herd”

AHDB said, “the fertility-for-life cycle for an individual cow includes calf and heifer rearing; first mating,

pregnancy, and calving, then subsequent cycles of mating, pregnancy and calving as a member of the milking herd, and eventually culling. Attention throughout the whole cycle pays dividends – especially if you can do this for every animal.

“At each stage of a cow’s life, a good management plan provides answers for an important question: today, have I done all I can to ensure high reproductive performance?”

“Fertility is influenced by many factors; monitoring herd performance, identifying areas of improvement and how considering selection options can help build a framework to improve fertility in your herd.

“A fertile herd is more profitable, has better lifetime performance and is healthier. It is more productive, calves more easily and when you want it to calve, as well as offering more opportunity to sell surplus animals or increase herd size.

“Improving fertility gives you flexibility to better manage your dairy farm and herd. Better fertility performance allows you to maximise the efficiency of each individual cow in your system to produce milk.”

When Potstown joined AHDB’s Strategic Dairy Farm programme in 2021, their herd’s pregnancy rate was 17.7%. After focusing on improving



Gareth Owen walking across Potstown's 350 acres

l expands and evolves

fertility to hit a target of 25%, they achieved a 27.9% result by changing protocols, looking at the ration and spending more time with better attention to detail.

As a part of the programme, a steering group consisting of their vet and other local farmers offered support through considering new ideas, discussing goals, and reviewing the progress made. Callum from Ark Vets has been instrumental in making a number of changes to improve herd fertility.

Gareth said, “working alongside our vet and re-visiting our protocols, we carried out routine fertility visits and routine post-partum checks, synchronising cows not seen after set period, helping us to maximise our SR on farm.

“The additional improvements we made include genomic testing, maximising ventilation in the sheds, improved mobility scores with proactive hoof care, alongside what we were already doing to improve fertility”.

Metabolic profiling has helped Potstow fine-tune their feeding practices and build a greater understanding of how the herd can produce the milk quality, yield and margins they wish to achieve.

Callum added, “one of the key factors that can affect conception rate is nutrition. Back in 2021, we were seeing poor colostrum levels in the calves and wanted to explore if the nutrition was affecting fertility, so we worked with Potstow and Alastair Macrae at the Dairy Herd Health and Productivity Service (DHHPS) at Edinburgh University to carry out a metabolic profile.

“The results identified negative energy balance in the dry and early lactation cows, further leading to poor ovarian function for up to 100 days post challenge. Potstow now carry out quarterly metabolic profiles, helping them to maximise feed efficiency, positively impacting conception rate”.

Looking at the results, Alastair got a good understanding of where the farm needs to focus attention to ensure they can get the most out of the herd. Alastair said, “the fresh calvers are short of energy, but

the issue is not a lack of energy in their diet. Nor is it starting with the dry cows. So, the problem must be with freshly calved cow intakes or digestion.”

Over the last two years Potstow has reduced their calving interval from 395, to 373 days, increase their conception rate to first service from 23% to 38% and improve their average submission rate (SR) from 75.2% to 75.9%. More importantly, they average pregnancy rate is now 27.9%, far exceeding their target of 25%.

The Potstow team are looking to continue improving their fertility rates. Over their final year in the Strategic Dairy Farm programme, they are focusing on how to improve their homegrown forage yields and the improvements within their herds through better use of genomic testing results.

You can follow their story online, at www.ahdb.org.uk/farm-excellence/potstow-farm.



Gareth Owen with the herd of Holstein and Jerseys

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Keeping on top of dairy cow fertility and herd profits

Independent breeding consultant **Kevin Lane** looks how new technology and genetic gains can be used to improve dairy herd fertility.

Cow fertility has always been a driver of dairy herd profit because empty cows or those slow to conceive cost producers money.

However, there are several tools that farmers can use to address fertility issues. These include activity monitors, manual heat detection, aids such as paint and patches and genetics for long-term improvement in fertility and production.

Whatever the method used submission rates are still the key to getting cows in calf and high rates can only be achieved by identifying bulling cows accurately.

For a long time the only aids that a farmer had to spot bulling cows was observation and good stockmanship. The same applied to identifying sick cows or those off colour. But some twenty odd years ago things started to change when the first 'activity' monitors were marketed in the UK. Using new technology these recorded animal movements – bulling cows show a big increase in distance covered over the hours that they are on heat and this, compared to their usual average, flags them up as ready to serve.

Heat detection monitors

Today there are very sophisticated monitors that go beyond just recording potential heats as the technology can monitor parameters such as rumination, standing and lying down time, and 'about to calve alerts' to name but a few.

There are a number of options on the market, some with tags, some with collars and others with leg-bands. Most are cloud-based with access to data via farm computers, tablets and mobile phones, often with simple graphs to pinpoint optimal service time.

Some have a better range than others which may be a consideration for grazing herds. For example, some units only download data once animals return to the farmstead from grazing. Some are linked to parlours and shedding gates, some not. Others have add-on features that may be herd specific.

With lots of different features and module options, it is worth investigating several systems to see what may suit individual farm's management systems.



Paintstiks are a popular method for block calving herds

“There are a number of options on the market, some with tags, some with collars and others with leg-bands”

Manual heat detection

Manual heat detection is, of course, the oldest and original method of heat detection. But the modern dairy cow has a much shorter heat period today than fifty years ago. Top stockmen still have excellent results using their own eyes and stockmanship skills but cows need to be checked frequently and good records kept, particularly pre-service heats. This gives a starting point to watch animals going into and past the voluntary waiting period, and flags up irregular heats or non-bulling cows which may need a PNC (post-natal check).

Signs vary from full standing heat to head mounting, attempting to mount

other cows, being noisy, chin resting, being restless, sniffing or licking other cows and scuffing on the tail head and flanks and a bulling string.

Alongside manual observation, some farms use milk progesterone testing for an accurate method of finding cows in heat. Tests are relatively cheap and easy to use. There are several on the market which provide results in a few hours.

Markers and stickers

A popular method, particularly for block calving herds, are to use Paintstiks (chalk), tail paint, or stickers such as Estrotect and Kamars. These are applied in one form or another to the tailhead and the cow is identified as being in heat when the chalk or paint is rubbed off, or the markers change colour. The former are cheap and effective and the once or twice weekly 'topping-up' gets the farmer or staff among the cows where stockmanship can come into play.

The stick-on patches are a little more expensive than the paints but still relatively cheap and show a positive sign of a colour change whereas the paints need a trained eye to look for a negative - no mark is left as it is rubbed off.

One downside to these aids is in yards where brushes are used, as they can create false positives. They can also get knocked on cubicle rails and gates.

Have you heard of Q Fever?



A disease that has the potential to have significant impact on livestock health and production.

Do you recognise these signs?

Weak newborn

Abortion

Infertility

Metritis

Stillbirth

Retained placenta

Premature calving



If you are seeing these signs in your herd without an obvious cause ask your vet about Q fever and diagnostics



DID YOU KNOW?

- Q Fever is endemic in GB dairy herds¹
- It causes reproduction and fertility issues to cattle, sheep and goats²
- It is also a zoonosis, risking the health of those working with livestock
- It is caused by the bacterium *Coxiella burnetii*
- Infection is generally via inhalation but also via faeces, milk and vaginal mucous
- *Coxiella b.* can be carried on the wind^{3,4,5}
- *Coxiella b.* is persistent, surviving up to 5 months in soil⁶

Speak to your vet about diagnosis and vaccination if you are concerned about Q fever.

This information was provided by Ceva Animal Health Ltd, makers of Coxevac®

www.qfever.co.uk

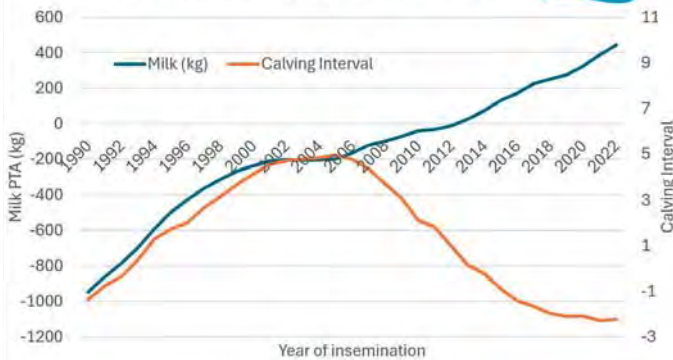
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Trends based on Insemination data

AHDB



Outside contractors

A 'walk and chalk' method is commonly employed by companies offering to come in and check the cows daily and inseminate those that are flagged up. This manual method is often accompanied by electronic tags or collars. This can work well on farms that are either short-staffed or employ relatively unskilled staff, as an external contractor will often increase heat detection and pregnancies, and will submit regular reviews on performance and results. Costs vary according to the service offered.

Improvements through genetics

Long-term fertility improvements can come from genetics with most bulls having a Fertility Index value in their proofs. It is also part of the three main indexes of £PLI (17% fertility), £ACI (24%) and £SCI (26%) as well as HealthyCow (29%).

There are a large number of daughters in each sire's index value, even for the minor breeds, with reliabilities ranging from 76% for Holsteins to 72% for Jerseys. Obviously genomic bulls from all breeds have no initial daughter information.

The fertility index was introduced nearly 20 years ago and has shown to have had a significant effect on the fertility of the national herd. How is it calculated? It uses a variety of traits – six in number, which can either directly measure fertility or have a very strong correlation with it. They are: calving interval, non-return rate, body condition score, milk yield at insemination time, days from calving to first service and number of inseminations to get a cow pregnant.

The fertility index scale is within a range of approximately -15 to +15 with every point increase reducing calving interval by +0.6 of a day and improving non-return rates by 0.25%. So a rule of thumb would be that for every two points increase in the index there will be a reduction in calving interval of a day. As can be seen in the chart, since 1990 the trend has been for increased milk production from around -1,000kg (adjusted) to +500kg but calving interval increased until 2005 when it plateaued and after the introduction of the fertility index at that time, has continued to decrease.

Marco Winters of AHDB Dairy comments: "For anyone concerned about their herd's fertility, we advise breeders to use bulls with a Fertility Index which is higher than the average FI of their youngstock, which they can find on their Herd Genetic Report (HGR). Alternatively, try to use bulls which have a FI of at least +5 points to ensure progress is made."

To find this information, producers will need to look at their AHDB Herd Genetic report on the AHDB website (ahdb.org.uk). This will give breeders lots of other genetic information about their herd. For new users registering is quick and easy.

Management, of course, plays a huge part in fertility but all genetic gains are permanent and cumulative from generation to generation and while fertility is very important, it should be considered along with other traits such as production when selecting service sires.

Overall there are a number of measures that can be used to address poor fertility from short-term daily improvements in heat detection to long-term genetic gains. As a serious indicator of farm profits it is something that every farm needs to work on and there are always areas for improvement.

Fertility drives the economic engine on the farm

A combination of routine testing and best management practices will help minimise the disruption of future fertility resulting from Bovine Viral Diarrhoea (BVD) infections.

Rob Horn from Neogen comments that BVD remains a problem in many UK dairy herds, having a negative impact on fertility which in turn compromises production and longevity.

BVD has been estimated to cost £25-61M (AHDB) in Great Britain, so eradication represents a big opportunity to reduce costs and improve efficiency and welfare.

“Cows infected with BVD will inevitably suffer from compromised reproductive performance. This can include infertility, but even if they do conceive they are at risk of abortion, embryo mortality, poor foetal development and the eventual birth of weak calves. Calving interval will be extended, and production will be reduced with an increased risk of culling. All these represent an economic drain on the business.”

While the increased uptake of vaccination is helping reduce the incidence of BVD, Rob suggests that vaccination alone is not a 100% successful strategy. He says Persistently Infected (PI) animals may experience vaccination failure contributing to the on-going spread of BVD, as the viral load can overwhelm the vaccine.

“PI animals can only develop during pregnancy. If a pregnant cow encounters a BVD infection between days 42-125 of gestation, the virus will persistently infect the foetus due to its under-developed immune system. The foetus then perceives the virus as part of itself and so never fights the infection.

“While the cow will develop antibodies to fight the virus, the calf will continue to shed substantial amounts of the virus throughout its life, infecting other animals for as long as it remains on the farm.”

Recommendations

Rather than relying solely on a vaccination programme to control the spread and consequences of BVD, Rob recommends implementing regular herd screening alongside a vaccination programme and an effective biosecurity regime.



“If a pregnant cow encounters a BVD infection between days 42-125 of gestation, the virus will persistently infect the foetus due to its under-developed immune system”

He says the new Neogen Igenity Extra service allows farmers to get calves tested for both genomics and BVD from a single sample, minimising the time taken in collecting and sending off samples for lab testing. It also helps ensure that only the best BVD free genetics are reared.

The Igenity Extra genomic data is powered by AHDB and assesses Production, Management and Health traits. This gives a comprehensive view of the genetic merit of the calf. By including the BVD test alongside this, you enhance the overall data set for that

calf, making it a more insightful and beneficial analysis.

“Our BVD results are accredited meaning they can be submitted to national eradication schemes including BVDFree England and the Scottish BVD Eradication Scheme. At the same time, you also benefit from the insight that genomic results can bring on the same sample.

“Where samples are to be BVD tested, this is done first. If the calf is BVD positive, genomics testing is put on hold and the owner is contacted to see if they still want to proceed with genomic testing. In most cases BVD+ animals are not genomically tested.

“The combined testing will ensure that you can base your herd replacement programme on the calves with the best available genetics which are not carrying BVD, so eliminating problems while optimising herd improvement.

“Once a sample is received it is processed and results back on farm as quickly as possible, with a turnaround of just a few weeks, but with BVD results within a few days. This is helped by having all the testing on our UK site near Ayr. But this does mean there is a period of time when calves will be on farm before BVD results are known, meaning it is important to manage the risk of infection spreading.”

Until results are back it is important that steps are taken to reduce the risk of



cross-contamination and Rob stresses the importance of good biosecurity. Calves should be kept separate and away from other calves and pregnant cows until results are available. All PI calves should be removed from the farm as soon as possible. While on the farm, PI calves should be fed with clearly identified equipment.

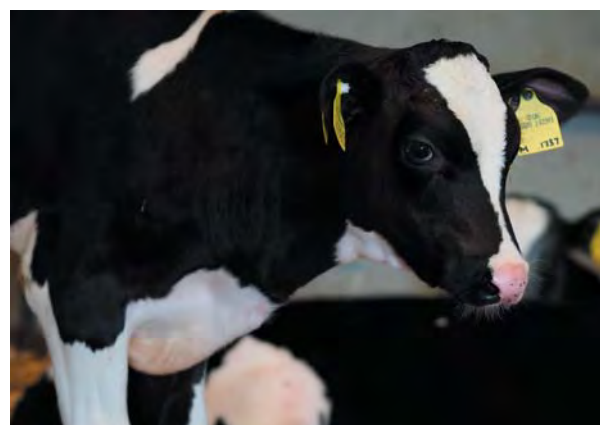
Disinfection is a core part of effective biosecurity regimes. Once a PI calf has left the farm, the pen should be thoroughly cleaned. Remove any organic

“BVD is still a major problem in the UK but a programme of routine testing of all calves can help cut the spread”

matter then apply Farm Foam EVO detergent to the surfaces, leave for 20-30 minutes and then rinse. Allow surfaces to dry and then disinfect the whole area and equipment with Neogen Viroxide Super at a 1% dilution which is proven effective against BVD, making sure to soak all the surfaces.

“BVD is still a major problem in the UK but a programme of routine testing of all calves can help cut the spread. By combining the BVD testing with genomic testing, producers can help reduce the consequences of BVD on fertility while also ensuring genetic progress is optimised,” concludes Rob.

Left: Combined testing will ensure that you can base your herd replacement programme on the calves with the best available genetics.



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Embracing innovation pays off with herd performance

Being open to change and innovation, as well as adapting herd management in response to external challenges, is something that Michael Broadley from Brundcliffe Farm, Hartington, Derbyshire puts into practice with the two pedigree herds the family business runs.

Whitecroft Ayrshires is a 175-cow milking herd which is run alongside the smaller Brundcliffe Holstein herd, which is currently around 40 milking cows. Michael, along with his brother Andrew and nephew Ben, supported by two part time workers, prioritise attention to detail and strive for robust cows with good longevity.

With replacements, there's around 500 animals in total, with 175 lactating cows at home and youngstock contract reared on three separate holdings. The farm is 245 acres has the "accolade" of being the highest registered Ayrshire herd, at 1100 feet above sea level.

"Despite being high up and fairly exposed, the farm is really good at growing grass, although it is around three weeks later than farms lower down and more sheltered. We are after a cow that is a good converter of feed to milk, has good udder health and gets into calf easily," Michael says.

"Recently, we have reduced the number of Holsteins and increased Ayrshire numbers. We AI everything ourselves, and even though we were selecting sires for negative stature traits, the Holsteins just kept getting bigger and bigger," he explains.

Another adjustment being implemented is in response to a changing situation with the contract rearers who help with the calves.

"We had calves at five different units, which is less than ideal, and when one told us they were giving up, it helped us make the decision to change policy," says Michael. "We will cut the numbers being reared and introduce more beef by AI'ing to Angus and sell these calves at Bakewell market at 42 days instead. It's all about controlling the controllable, and with fewer being reared and on only two units, it should be much easier to keep on top of performance."

In April 2022, Michael got in touch with AHV's (Animal Health Vision) Herd Health Plan Manager, Paul Marrs as he wasn't happy with some areas



Ben and Michael Broadley are impressed with improved herd performance

"The year-round calving herd is milked twice a day and one of the first things to tackle was metabolic challenges."

of herd performance. AHV, the industry leader in quorum sensing-powered animal health solutions, prioritises improving herd health and longevity to establish a sustainable, profitable dairy operation.

Products in the range focus on disrupting the communication between bacteria that pose a challenge to farmed livestock. This process breaks down the biofilm that protects the bacteria making it accessible for elimination by the immune system of the animal.

"Our initial visit to the farm

highlighted a few issues that Michael was keen to improve. After a few months, we moved on to the AHV Herd Health Plan as it allows us to analyse milk records and farm data to provide a quarterly report. This means we can check progress and monitor key metrics," says Paul.

"The AHV Herd Health Plan underpins the regular consultancy visits to customers and give us time to have in-depth discussions with farmers. Michael and the team already had a lot of data collected, and they had a good idea of where improvements were needed. We started with targeting some of the key fertility metrics – conception rate to first service, average days open, as well as keeping check on reasons for culling."

The year-round calving herd is milked twice a day and one of the first things to tackle was metabolic challenges. These challenges, common during periods of stress, can negatively impact the start to lactation which consequently has a long-term impact on performance.

Post-calving and into early lactation, cows metabolise body fat reserves to

	Before	Since adopting the AHV Herd Health Plan
Conception rate to first service	35.5%	47.2%
Average days empty	109	101
Calving interval	385 days	372 days
Culling for poor fertility in 2023	10	1

Farm facts:

- 1100 feet above sea level, regenerative approach to management
- 245 acres of grassland
- No artificial heat detection aids are used

meet the energy demands needed to maintain lactation levels. Studies have shown that 40-60% of lactating cows have subclinical ketosis¹, with the highest prevalence being at day five in milk².

“Since adopting the AHV protocol, metabolic health has greatly improved. Cows get a Booster Tablet two weeks pre-calving and 10-days post; the tablet promotes the animal’s metabolism in the liver and rumen, and provides sustained and fast additional energy,” explains Paul.

Cows also receive two StartLac Tablets just prior to calving which contain calcium, magnesium, phosphate and vitamin D3 in highly bioavailable forms. This provides the cow with the essential minerals needed to support muscle contraction, metabolism, milk production and overall health.

“Combined, the products work by supporting the cow at times of stress or demand which can make them susceptible to health challenges,” Paul Marrs explains. “Disrupting the bacteria’s behaviour and enabling the cow rapid access to the energy which production is demanding, reduces the likelihood of problems in the future.”

The cows at Brundcliffe Farm also receive a Metri Tablet and StartLac Paste once calved which helps to improve the hygiene of the uterus and stimulates the release of the placenta.

Typically, 25-40% of animals develop severe metabolic health issues in the first two weeks after calving, with work showing that 80-100% of animals have bacteria in their uterine lumen in this period³.

Cows affected by uterine challenges are less active and therefore have a reduced dry matter intake. The resulting loss of energy may have a strong impact on fertility measurements such as insemination rate, heat expression and inter-calving periods. Longer term, such issues can impact milk production and the animal’s productive life in the herd.

“We are about 18 months into the AHV Herd Health Plan and the cows’ performance has definitely improved,” says Michael. “With Paul tracking the key metrics we can easily keep a check on it as we move forward.”

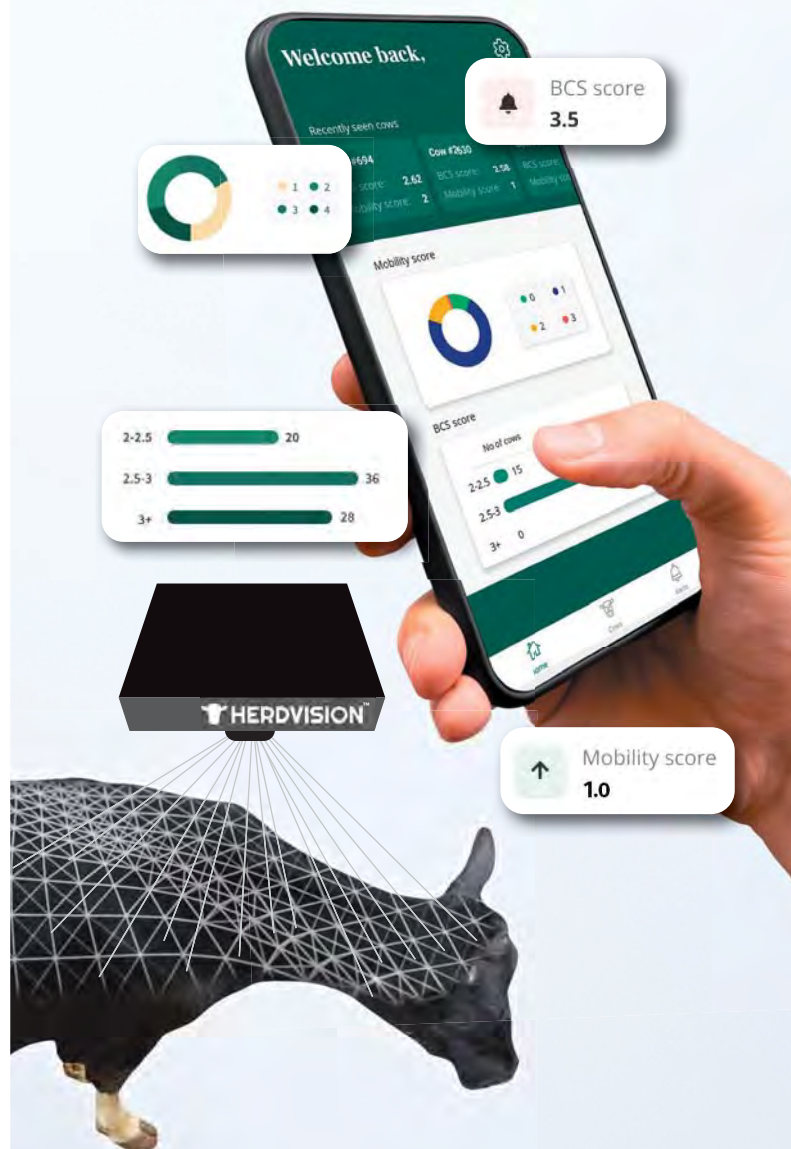
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Get the basics right for improved calf health

Ensuring the safe delivery and subsequent robust growth of a calf is at the start of every dairy unit's production cycle, says vet **Rob Drysdale**, of Ruminant Health Solutions.

Studies show that dairy herds are still losing too many calves in the birth to weaning period, with BCMS data showing mortality rates in dairy calves at 6% in the first three months of life¹.

"Looking into the main causes of death and we see that scour accounts for almost 50% of mortality in the birth to six week phase, with pneumonia then becoming a bigger issue post weaning²," says Rob.

"Cases of scour damage the cells lining the calf's gut, which means reduced absorption of nutrients and increased fluid loss. Anyone with calves need to act as soon as a case is seen; left unchecked it could lead to the calf rapidly declining and, in severe cases, death," he adds.

Causes of scour include viruses (rotavirus, coronavirus), parasites (Cryptosporidium, Coccidiosis), bacteria (*E. coli*, *Salmonella*). Mixed infections are also common and nutritional scour, when the changes to the diet or consistency such as milk feeding is the cause, are more commonplace than may be thought.

A calf-side scour test kit, available from Progiene and its distributors, can detect coronavirus, *E. coli*, Cryptosporidium and rotavirus within 10 minutes. Knowing what you are up against helps with the preparation of a plan and operating protocol.

According to the UK Dairy Biosecurity Survey, which was carried out for Progiene, while 89% of those questioned have a biosecurity protocol, only 8% were satisfied with them, and only 31% followed them.

"A standard operating protocol (SOP) possibly devised in conjunction with your vet and posted on the wall of the milk prep area or calf shed can be an invaluable tool, especially if different people work with the calves from day-to-day," Rob adds.

"Good biosecurity underpins health and hygiene but what is biosecurity? It can be explained as a combination of measures taken to reduce the risk of the introduction and spread of infectious diseases," he adds. "This means assessing



Scour accounts for almost 50% of mortality on the birth to six weeks of age phase

"Cases of scour damage the cells lining the calf's gut, which means reduced absorption of nutrients and increased fluid loss"

risk and implementing measures to decrease that risk, safeguard and improve health status on the farm."

Calves are born with no immunity, into an environment with a significant pathogenic load, be that in housing or bedding, from the dam or being shed by other calves. However, following a few simple best practice guidelines, can help ensure the calf is not only protected but the risk of creating an infection minimised.

"A clean calving pen is essential, as is ensuring the cow has sufficient space and access to water," Rob says. "Following thorough cleansing AND disinfection is key: by removing all organic matter from the pen, pressure washing clean and then using a Defra approved disinfectant. Providing plenty of clean bedding or a spotless calving pen are the basics that ought to take place on all farms.

"Moving on, ensuring the calf gets enough quality colostrum, 10% of body-weight is the target, in the crucial first few hours of life helps not only provide important early antibodies to help the calf resist infection pressure, but also lots of other essential proteins and fats," he explains. "Your vet may recommend vaccinating the dam to ensure antibodies are passed on to the calf, as well as giving advice on calf health management."

Biosecurity around calves

How do pathogens get to be in close proximity to calves, and go on to lead to disease?

"Bacteria, viruses or parasites capable of leading to scour in calves can be



According to the UK Dairy Biosecurity Survey, 80% of farmers have a boot dip yet almost half don't require visitors to use it



Good biosecurity underpins health and hygiene, says vet Rob Drysdale

in the environment if it's not been cleaned effectively, can come in on boots or clothing, or can be airborne especially if the airspace is shared with older animals."

According to the UK Dairy Biosecurity Survey, 80% of dairy farms have a boot dip, yet almost half don't require visitors to use it. Worryingly, only 62% change it after 15+ uses.

"A simple foot bath label can help manage this and a record sheet ensures that the right product is used, at the correct dilution and for the right amount of time," he says. "These are often available from your merchant and are simple, quick and easy to use."

Coxicur from Progiene is a Defra approved general order disinfectant for use against bovine tuberculosis, Coccidiosis, Cryptosporidium, viruses, bacteria and mould. It can be used in calving areas, calf pens, on feeding equipment and as a boot dip. It can be used with a pressure washer or as a foam and is low odour, meaning it is a good choice for feeding and water buckets, as well as cleaning teats.

"To improve calf shed biosecurity separate boots and even overalls should be considered as this can help prevent the movement of pathogens from the older stock to the calves. And it is always good practice to ensure all visitors have clean boots on arrival, and dip before even entering the farm. Providing protective overalls and boot covers is best practice," Rob says.

"Cleaning feeding equipment, the milk prep kitchen and water buckets with hot water and the correct disinfectant at the correct dilution rate are critical. A clear SOP that is easy for all in the team to follow can really make the difference," Rob concludes.

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How to find the most fertile beef sires

Fertility has a crucial impact on the economic efficiency and productivity of dairy herds, says Genus ABS



Using fertile semen can guarantee improved conception rates, shortened calving intervals and reduced costs.

Determining which sires are most fertile and ideal for a specific operation is essential to every dairy farmer's genetic strategy.

How can you find the most fertile beef sires to breed from?

To help you to ensure you are breeding from the most fertile genetics, Genus ABS created the FertilityAdvantage Index which is used to evaluate the fertility of beef sires which have been used in the dairy herd.

This index includes insemination data from BoviSync herds, which use Reproductive Management Systems, and industry data, including insemination events on both Genus ABS sires and those from across the industry.

With over 750,000 inseminations from approximately 1000 herds and 400 individual beef sires, farmers can be confident in the validity of their results and findings.

Assessing the most fertile beef sires

Conception rates of Genus ABS' sires are determined with data on many environmental effects in the evaluation considered so that they can provide accurate and honest information to dairy farmers. Fertility of the sires is calculated with numerous variables in consideration.

Upon assessment evaluation, each sire is ranked into three tiers; Platinum, Gold and Silver. Those with the most superior fertility performance will be awarded a place in the Platinum tier. Platinum fertility sires deliver a conception rate up to eight percentage points higher compared to silver sires generating an additional £34 per insemination.

Those which fall into the Silver and Gold tiers also have excellent fertility performance. Due to their rigorous assessment criteria, any animals who do not display great fertility will not fall into any of the tiers listed.

EMEA Beef Genetics Data Analyst at Genus ABS, Fern Pearston, explains: "We've accessed data from our



"Upon assessment evaluation, each sire is ranked into three tiers; Platinum, Gold and Silver"

on-farm software, BoviSync, as well as milk recording data for our FertilityAdvantage evaluation, meaning we can access over 750,000 beef insemination records from almost 1,000 herds. The size and range of this dataset not only gives us many records per sire, but it also allows us to correct for environmental factors that influence the success of insemination, such as season, days in milk, or lactation number, so we can be confident that the FertilityAdvantage index is a strong indicator of sire performance.

"Our FertilityAdvantage index enables us to remove poor fertility bulls from the market and ensure that only favourable fertility bulls are sold to our customers. Thanks to Bovisync, we can also include data from our young Cornerstone bulls in the evaluation,

FertilityAdvantage

Fertility that's outstanding in its field.



allowing us to start estimating their fertility before they are released to the wider market.

By using this index to identify bulls with above average or outstanding fertility, our Breeding Advisors can help dairy farmers to find a bull which fits their specific herd needs as well as their budget. The bulls with the highest

conception rates will fall into the Platinum tier. These bulls would be most beneficial to customers specifically looking to improve their conception rates, or for block calving farmers who want to bring late calvers more tightly into the block, with increased likelihood of pregnancy from fewer inseminations."

The evidence demonstrates that superior genetics enable farmers to generate more profit and guarantee better fertility; mainstays for productive and efficient farms.



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Methionine plays big role in successful transition

Paying specific attention to the amino acid content of transition diets could have a significant impact on transition success and getting cows back in calf.

Kirsty Farnan from Adisseo explains that all proteins are made up of a combination of amino acids. There are 20 amino acids, 10 of which are classified as essential, meaning they need to be supplied through the diet of the cow. A diet must provide the balanced supply of amino acids the cow requires, which varies significantly by stage of lactation.

As soon as an essential amino acid becomes limiting, in other words, there is not enough to meet requirements, performance is affected. It is estimated that 85% of UK dairy diets are deficient in methionine, the first limiting amino acid.

“The figure is even higher for transition diets with almost all diets deficient in methionine which is having a big impact on fertility.”

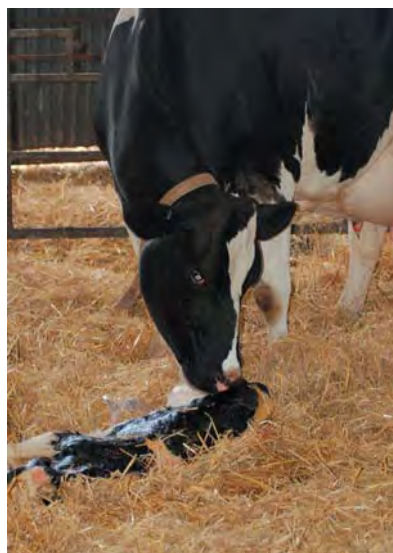
Kirsty explains that methionine plays several important roles in transition cows. It is a fundamental building block in the development of the egg, improving the accumulation of lipids in the egg which means it will have a better energy supply. The eggs that will be fertilised when cows calve down develop during transition, and methionine deficiency results in poorer quality eggs which in turn reduces conception rates.

Furthermore, methionine is involved in helping cows recover from inflammation. This is particularly important as it helps prepare the uterus for the implantation of the fertilized embryo.

“Unless the uterus is able to recover quickly, the consequence is that the uterine environment will not be ideal for embryo implantation so even if fertilisation occurs the pregnancy will not hold.”

Finally, she explains that methionine also has a role post calving, helping improve liver function to reduce the risk of ketosis.

Kirsty explains the problem is: “Providing adequate levels of methionine in a lactating dairy cow diet is difficult with the feed materials we have in the UK. The current approach is to over-supply crude protein to supply enough methionine. This is costly and a waste of protein, which has environmental consequences.



A diet must provide the balanced supply of amino acids the cow requires

“The figure is even higher for transition diets with almost all diets deficient in methionine which is having a big impact on fertility”

“The dry period is even more challenging as dry cow diets will typically be lower in protein and energy. With lower dry matter intakes during transition, it is difficult for cows to have adequate intakes of methionine, especially given the low levels found in feed ingredients such as forages and straw, which make up the majority of the transition diets. This means that methionine levels will be inadequate in the critical three weeks before calving when eggs are being developed.

“Finally as cows calve down, the demand for methionine will increase greatly and it will take time for cows

to move from a state of deficiency to adequacy. Until this happens, uterine recovery and early lactation yields will be affected, compromising transition success.”

Research shows significant benefits from supplementing cows with MetaSmart, a unique rumen protected source of methionine which can be added to compounds and blends.

“Studies at universities in the US confirm that supplementing diets with methionine can have a positive effect on fertility. Embryo size was increased and pregnancy losses, where a cow becomes pregnant and then loses the embryo, were shown to be reduced by 13%.

“The research suggests that the stronger embryos resulted in more embryos successfully implanting and more cows getting pregnant. While supplementing with methionine in the transition period did not increase the total number of cows getting pregnant, it accelerated the rate at which they did,” comments Kirsty.

“Data shows days to conception were reduced by 11 days in cows when rumen protected methionine was used to balance the diet. With each additional day open calculated to cost £3, this represents a benefit of £33 per cow.

“In a recent study where rumen protected methionine was used to balance the methionine supply in the transition and full lactation, culling rate was significantly reduced by over 6%. Six fewer cow per 100 were culled through a combination of better fertility and health.

“The trials also show that supplementing during the transition period allowed cows to settle into lactation better as there was more methionine to meet the increased demands for milk production.”

Achieving high levels of fertility is still fundamental to sustainable milk production and driving margins. The transition period is where the foundations of future fertility are established and nutrition plays a huge role in this. “Methionine is an essential nutrient that can easily be adjusted and balanced to optimise health, fertility and economics,” Kirsty maintains.

Introducing Artificial Intelligence to improve herd performance – free trial

How about trialling AI on your unit? We're not challenging your routine practice; we're referring to Artificial Intelligence to help you to improve herd health, productivity, sustainability and profit.

Predicta GUARDIAN by Dairy Data Warehouse is the next generation prevention tool that is able to uniquely predict six transition cow diseases in dry off for the next lactation including ketosis, mastitis and lameness. You can now prevent disease from hitting your herd and act before it is too late by introducing Predicta GUARDIAN. We simply connect to your current herd management software without requiring any hardware, sensors or installation fee.

We are offering Predicta GUARDIAN for you to trial free of charge, and there's no hardware or installation fee.

For more details and information on eligibility, please email inquiries@dairydatawarehouse.com



Model-level settings

Model	Days before calving	Predicta	Model configuration	Sensitivity	Estimated Disease Incidence (%)	Estimated Disease Cost	Estimated Prevention Cost	Estimated alarms (g/m)
Ketosis (BHB)		☒	VIEW					20
Milk Fever		☒	VIEW					0
Displaced Abomasum		☒	VIEW					1
Retained Placenta		☒	VIEW					0

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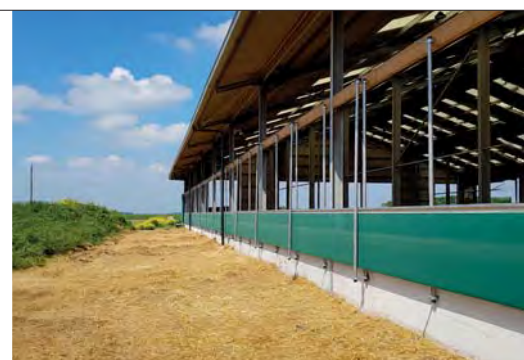
DID YOU KNOW...

Fertility can be significantly impacted by Heat Stress – affecting calving patterns and impacting profitability.

Scan the QR code below to talk to Galebreaker about reducing the impact of Heat Stress through proper ventilation.



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Increasing fertility with optimal heat detection

Based on highly precise measurements of a cow's crucial individual parameters, smaXtec provides reliable heat detection and the optimal insemination timing, taking the guesswork out of breeding cows.

Detecting heats and inseminating cows at the right time is critical to the economic success of dairy farms and to improving overall herd health and productivity. However, visual oestrus detection requires many factors to be considered and is very time-consuming.

With smaXtec, intensive visual observation by the farmer is no longer necessary, as the system sends a notification to the smartphone or PC as soon as cows are in heat, allowing farmers to improve their heat detection rate and service per conception and reduce the calving intervals.

Moreover, the health management system helps farmers to identify cows with fertility problems as well as open cows that have been confirmed pregnant.

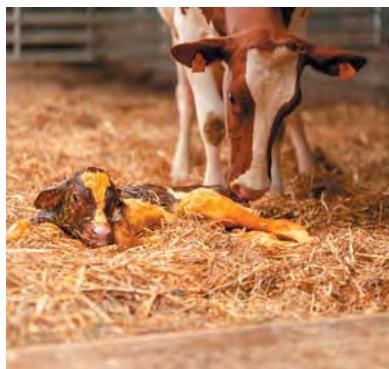
With its unrivalled bolus technology, smaXtec is much more than a traditional heat detection system. Thanks to the unique position of the smaXtec bolus and the highly accurate measurement of inner body temperature, drinking cycles and water intake, rumination and activity, the system provides unrivalled data from inside the cow. This allows the best possible monitoring of herd health and reproduction, enabling farmers to improve animal health and profitability.

Save time and money with accurate heat detection

When farmers observe their cows visually, it can often lead to missed heats, especially for cows that do not show typical external signs. With smaXtec's highly accurate heat detection, farmers can be confident that the cows can be served at the right time. As every missed heat is a cost factor, farmers can significantly increase insemination success while reducing hormone use and labour. Not only does smaXtec detect cows in heat, but it also indicates the optimal insemination time. This results in a higher conception rate, better calving index and, ultimately, improved fertility.

Automatic abort detection

The system is constantly evolving. One of the latest additional features is the abort detection, which identifies pregnant animals with a conspicuous



Continuous monitoring puts control in the hands of the farmer

oestrus-like cycle. These cows are placed on a list for a repeat pregnancy check to avoid cows with undetected aborts falling out of lactation. By detecting aborts early, farmers can get the cows back into calf sooner.

Be alerted in good time before calving

When it comes to calving, smaXtec also offers great support: The system sends an alarm on average 15 hours in advance. This allows farmers to make necessary preparations for calving, support the cow if necessary and ensure a smooth calving process. Thanks to continuous health monitoring, any signs of metabolic disorders are detected and diseases like milk fever can often be completely avoided by treating cows

immediately (i.e. with calcium) - for a good start to a healthy and successful lactation.

Financial advantage

Using smaXtec, farmers have access to insights on an individual animal and herd level information around the clock and that pays off: Customers report that they have achieved higher fertility rates and shorter calving intervals as a result of the system. In addition, they see a reduction of up to 25% in the number of open days in their herd and a significant reduction in the age at first calving.

"We find that the heat detection from smaXtec is second to none. Our conception rates have lifted because of this reason. The calving index has improved by 18 days since we started using smaXtec. So, putting it into real terms, money: smaXtec has paid for itself already, just on the calving index", reports farmer Peter Wood.

Only a healthy herd brings real success

Early detection of diseases and improving overall herd health is equally as important and a key factor of reproductive success on any dairy farm. By measuring cow health data continuously and precisely, smaXtec offers an outstanding system for early disease detection, allowing for the earliest possible intervention when necessary, reducing the risk of serious disease progression and significantly lowering the use of medications.

smaXtec enables farmers to manage their herds in a proactive rather than reactive way. This way they ensure consistently high milk yields and profitability, while reducing costs, workload and stress.



British Friesians – a perfect package

'Everything that has ever lived has been the product of natural selection' said the New Scientist magazine recently, and how well that chimes with the attributes of the British Friesian.



British Friesian cattle have been bred over generations by the tried and tested policy of breeding from a proven background. Mature animals convey valuable genetics for fertility and lifespan with the added

advantage of multiple yields, and this is good news for dairy farmers because replacements cost both time and money.

However, it begs the question, why has our Dairy Industry promoted a narrowing of selection by PLI, ignoring the need for a wide genetic base, and encouraging breeding from ever younger animals with sires and dams that have very little or no actual production behind them?

Similarly, **'if you focus on a single health metric, you are only seeing part of the puzzle'** and that is why you need a

cow that ticks more than just one box. The British Friesian is a resilient cow with strong legs and feet, bred specifically to walk and maximise grass and silage.

With 49 extra days of longevity and an extra 12.7 points for Fertility Index over other black and white breeds, the British Friesian's ability to retain body condition has surely contributed to their reputation as the world's best dairy breed for fertility.

These attributes make an invaluable contribution towards the good welfare standards required of UK farmers and, in addition, save time and expense through reduced serves per cow, sufficient replacements without sexed semen, and no unviable male calves.

A tighter calving interval also equates to more milk per annum and the NBDC Production Data also shows lower cell counts than any other Breed.

So, in simple terms, the British Friesian is a balanced, more easily managed cow and, being a Native Breed, it is bred to make the most of the UK's climate and conditions.

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On-farm results show key role genom

Data from US and UK dairy farms shows genomics positively impacts overall farm sustainability and reduces environmental impacts.



CLARIFIDE Plus can predict future health performance

Work by animal health company Zoetis with their genomic test CLARIFIDE Plus, showed the positive effect genomic selection in the dairy industry can have on environmental sustainability outcomes.

In a study¹ analysing genomic data and on-farm records from 13,000 cows from 11 farms in the US, the top 25% genomically ranked cows demonstrated:

- 10% less enteric methane emissions,
- 44% less antibiotic usage for their lifetimes
- 5% less feed for maintenance purposes as compared to the lowest ranking 25% of cows.

These reductions were achieved while producing 35% more milk and generating an average \$924 more lifetime profit per cow than those in the inferior genetics group.

The results used the Dairy Wellness Profit Index® (DWP®), unique to CLARIFIDE® Plus.

DWP is based on lifetime productivity and health, giving an overall prediction of how profitable a cow will be. Standard genomic testing allows for a prediction of an animal's potential; CLARIFIDE Plus gives a prediction on the animal's ability to remain healthy and fulfil its potential.

The results highlighted that selecting more profitable cows had a positive effect on production, health, and lifespan outcomes while allowing for more efficient and sustainable production practices, explained Zoetis Precision Animal Health Commercial Manager, Rhona McAlister.

"Dairy farmers are coming under increasing pressure from their milk buyers and consumers to reduce carbon footprint, which is why this comprehensive study focussed on measuring the impact of production efficiency on environmental outcomes.

"This large database proves that by breeding for improved lifetime productivity and health using DWPs, farmers can be confident they will not only



Farmers are realising the benefits genomic testing can have on overall farm sustainability.

"Dairy farmers are coming under increasing pressure from their milk buyers and consumers to reduce carbon footprint"

improve efficiency, animal health, and welfare but also reduce their environmental impact.

"It's also important to recognise that these gains are not short-term and will add up over time. It is our aim, both directly and through our partners, World Wide Sires and NMR, to help equip dairy farmers with the tools to meet their production, health, welfare, and environmental goals," she said.

The results from the US study also found the highest generic merit animals had :

- 27% less labour required for health

related issues

- 22% fewer lame cows
- 27 more Days in Production
- 22% fewer heifer replacements needed
- 8% reduction in cow mortality

"Reducing the number of replacements needed in a 1,000-cow herd by 22% equates to 150 fewer heifers as replacements, 840 tons less dry matter feed, and the ability to reduce enteric emissions by 17 metric tonnes of methane," she said.

Similar results are also seen across herds in the UK who have undertaken a genetic audit using CLARIFIDE Plus.

On one farm in England with 1,800 cows, the difference between the top 25% and bottom 25% when it came to milk production was 1,467kgs and for fat and protein, 67kgs and 32kgs, respectively.²

There were also noticeable animal health benefits between animals in the top 25% and bottom 25%, including reductions in disease prevalence of :

- 29% for calf scours
- 58% for calf respiratory disease
- 92% for metritis
- 55% for mastitis

McAlister added: "Calf and cow health has a massive impact on a farm's overall profitability and the emissions they produce.

ics plays in reducing carbon footprint

Calf scour, for example, not only causes gut damage - it can also lead to reduced lifetime performance and susceptibility to other conditions³. If calves are slower to grow, that can delay age at first calving, which has been found to directly affect emissions⁴.

By using CLARIFIDE Plus to predict a heifer's production potential and health earlier, farmers can manage the upfront costs by only keeping the heifers they want, keeping them in the herd longer, and significantly increasing their overall rate of genetic gain. This is whilst at the same time reducing overall emissions by having fewer but more productive animals on the farm," she said.



The Tissue Sampling Unit (TSU) is an easy way to gather a DNA sample.

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3. Heinrichs A & Heinrichs B. (2010) A prospective study of calf factors affecting first-lactation and lifetime milk production and age of cows when removed from the herd. J. Dairy Sci. 94:336-341.
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For more information, visit www.zoetis.co.uk



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The importance of good ventilation in your calf sheds



Respiratory infections have an ongoing influence on productivity, as the disease results in 14.5% of dairy heifers failing to make it to first lactation[1].

Bovine Respiratory Disease (BRD) is particularly associated with poor ventilation, as it spreads between calves which are sharing the same airspace.

The impact of air quality, draughts and humidity in youngstock housing can majorly influence the level of BRD present.

Without adequate ventilation, dust and gases build up and can irritate the mucous membrane in a calf's respiratory tract, making youngstock more susceptible to bacterial infections and diseases.

Ensuring adequate ventilation helps calves thrive from a young age and supports their long-term productivity as dairy cows by:

- Controlling moisture levels and preventing the spread of pathogens as high humidity allows bacteria and viruses to thrive
- Providing fresh air to calves, reducing their exposure to dust, pathogens and other particles in the air, helping to prevent respiratory issues
- Regulating the temperature in the shed, keeping calves comfortable and removing excess heat and moisture to maintain healthy conditions
- Removing harmful gases and improving air quality, which supports calf health and development
- Improving hygiene by regularly replacing stale air while also helping to remove odours and other contaminants

What does good ventilation look like?

Good ventilation in calf housing should aim to maintain a dry, fresh environment and reduce the incidence of respiratory diseases.

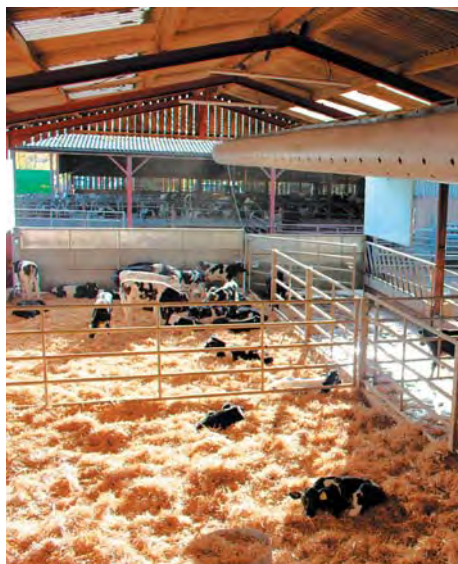
You can use smoke pellets or bombs to visualise stale pockets of air and demonstrate how air is moving. An anemometer can also be used to measure airflow in the shed.

Galebreaker have an expert team who can come onto your farm and support you to find the best way to improve calf shed ventilation.

For more information on how to book a consultation, Tel: 01531 637900 or E-mail marketsupport@galebreaker.com

Here are our top tips for optimum ventilation in calf housing:

- Airflow should reach calves at 0.25m/s at a height of 1.2m from the floor to keep air fresh without draughts
- There should be at least 6-8 air changes per hour to remove moisture, dust, and pathogens from dirty air



- There should be an exit in the roof of the housing for dirty, hot air to escape
- Fresh air intake points should be at least 1.5m high to avoid draughts
- Moisture levels should stay below 60% humidity to prevent pathogen growth. Deep straw can help to absorb moisture from the calves
- Temperature should be kept above 5°C, with extra bedding if colder



How can a Positive Pressure Tube Ventilation system improve ventilation?

A Positive Pressure Tube Ventilation system, like Galebreaker's VentTube Fresh, can help to improve ventilation in calf sheds by:

- Gently pushing fresh air into the building in a regulated manner to provide consistent ventilation without draughts
- Evenly distributing fresh air near calves at the optimal 0.25m/s speed
- Circulating air without causing draughts that could chill calves due to the tube design controlling airflow
- Reducing humidity below 60% and removing moisture, dust and other particles that pathogens thrive on

- Regulating the temperature in the shed year-round to keep calves comfortable while removing excess heat and moisture.

By precisely delivering fresh air replacement, Galebreaker's VentTube Fresh can significantly improve air quality, hygiene and welfare in calf housing.

To find out if VentTube Fresh is right for you, call our office us on 01531 637900.

Maximise your farm productivity with Galebreaker & The Farm Equipment and Technology Fund (FETF)

Are you looking to boost your farm's productivity or enhance animal health and welfare? The Farming Equipment and Technology Fund (FETF) 2024 offers grants designed to support your agricultural endeavours. And now, you can harness the power of Galebreaker's VentTube, VVS, Rollerscreens and Agridoor range to achieve your goals.

Understanding FETF 2024 Grants

FETF 2024 grants cater to diverse needs within the agricultural sector. You can apply for more than one grant, tailoring your selections to suit your business requirements. However, it's important to note that FETF 2024 is competitive, and the funding you receive may vary based on the strength of your application.

Successful applicants can receive a grant ranging from £1,000 to £50,000 for productivity items, slurry management, and animal health and welfare initiatives.

How to Apply

To apply for FETF 2024, follow these steps:

- Review the item specifications and availability.
- Register with the **Rural Payments Service**. www.gov.uk

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ADISSEO - METHIONINE

Methionine supporting fertility

Methionine plays crucial roles in successful reproduction including the development of better quality embryos and improved embryo implantation. Together these mean reduced embryo loss and higher pregnancy rates. Around calving, demand for methionine is high meaning fertility can suffer. Supplementing diets with Smartamine or Metasmart can lead to better fertility.



For more information go to www.Adisseo.com

AGSENZE – HERDVISION

Excessive condition loss and lameness can significantly compromise cows getting back in calf. The HerdVision 3D camera system monitors BCS and mobility automatically and regularly, quickly spotting problems for improved health and production. HerdVision is eligible for up to a 50% grant under the Farming Equipment and Technology Fund.

For more information <https://herd.vision>



NEOGEN – IGENITY EXTRA

Igenity Extra is the only complete calf testing service in the UK, combining a full genomic evaluation with accredited BVD status from a single sample. Adding BVD status to genomic testing means more rounded decisions can be made, ranking animals that are BVD clear and with favourable genetic merit for more optimised breeding decisions.

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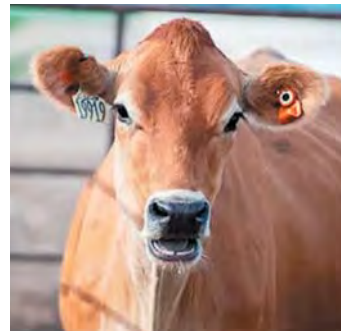
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FERTILITY HEALTH & WELFARE AWARD

Sponsored by: **ForFarmers**



Criteria - UK dairy farmers

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 Go to www.creamawards.UK for more details

Fertility boost from more precise condition scoring

Managing Body Condition Score (BCS) in transition cows is vital to ensure optimum fertility in the next lactation.

New research shows that using 3D technology to monitor BCS more precisely will deliver significant fertility improvements.

3D camera systems were initially developed to improve the frequency and accuracy of mobility scoring to reduce the losses associated with lameness. But according to Georgia Thresh, Technical Vet at 3D imagery specialists HerdVision, a large-scale farm study showed a substantial reduction in calving to conception interval and superior conception rates when BCS is monitored more closely and regularly using 3D cameras.

“Cows need to be in the optimum condition at drying off, not lose condition while dry and then calve in optimum condition. On many farms the challenge has been condition scoring cows often enough and with a high enough degree of precision and consistency, both of which can be overcome with technology.

“However, the camera takes a 3D picture every time the cow walks under the system. It can also measure depth to an accuracy of less than 1mm. This means it can measure condition changes with far greater precision that can be achieved by manual methods, ascribing a more accurate score for a cow and detecting smaller movements in BCS, whether up or down.”

The HerdVision system measures changes down to 0.01 of a score, compared to manual scoring which measures, at best, 0.25 of a score change allowing a better picture of BCS to be developed and allow changes to be assessed more closely. This accuracy is possible as the system reports condition on a seven-day rolling average rather than an individual day result.

This greater precision means it is possible to identify changes in condition sooner, allowing management to be altered as required. It also means it has been possible to more accurately define the optimum condition for cows at drying off and calving.”

A farm study carried out over 15 months on four farms in the UK with a total of 4000 cows, clearly demonstrated



“Cows need to be in the optimum condition at drying off, not lose condition while dry and then calve in optimum condition”

the impact of sub-optimal condition on subsequent reproductive performance on different dairy farming systems.

“By analysing the data, it was possible to assess the consequences of cows calving at different BCS on subsequent calving to conception interval,” Georgia continues.

“As you would expect fatter and thinner cows had extended calving to conception intervals. But we were able to more precisely pinpoint the optimum BCS for future reproduction, which is a level that would not be discernible by manual BCS recording.”

The data show that at calving cows should be a condition score of greater than 2.85. Cows with a score of less than 2.85 had a calving to conception interval

of 103 days while cows with a BCS equal to or greater than 2.85 had an interval eight days shorter at 95 days. Around 20% of the cows in the trial were calving down below the threshold and suffering poorer fertility in the next lactation.

As the camera records cows after every milking, potential problem cows would have been spotted sooner, allowing action to be taken to more closely manage condition in the run up to drying off, so they went dry at the correct score. They could then be managed to achieve a stable BCS over the dry period.

“At £5 per day extended calving interval, the cost of these cows being under condition was £40 per cow which means there is a good potential ROI on managing condition.”

The trial also assessed BCS change over the dry period and found that in many cases there were small, visually imperceptible changes in condition, but these changes were also significantly affecting reproductive performance.

The threshold was set at a 0.14 condition score change over the dry period. Cows that did not lose BCS or lost less than 0.14 BCS units averaged a calving to conception interval of 93 days with 34% conception to first service and 58% to second service.

Cows that lost more than 0.14 of a score had a 17 day longer calving to conception interval at 110 days with poorer service success rates - 23% to first service and 47% to second service.

“These data demonstrate the significant consequences of cows losing condition while dry, even at these very low, virtually imperceptible levels. By using 3D imagery it is straightforward to keep a closer eye on how cows are managed while dry, providing an early indication of whether the dry cow ration is supporting their nutritional needs.

“If early signs of BCS loss can be identified, it will be possible to refine dry cow management, housing and diet to address the problem. It is also important to remember that cows losing even small amounts of condition when dry are already in negative energy balance and at greater risk of continued problems when they calve down,” Georgia concludes.

DOWN TO EARTH

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Working for British Dairy Farmers

The UK's top regenerative agriculture event for livestock producers is back this summer at one of the country's leading farming establishments.

Wednesday, 3rd July 2024

GROSVENOR FARMS, CHESHIRE

Award-winning Grosvenor Farms in Cheshire will host RABDF's Down to Earth on Wednesday, 3rd July. Down to Earth is now in its third year and is designed to offer something for everyone interested in profitable farming and transitioning towards more environmentally acceptable systems.

Grosvenor Farms has been chosen as the host due to its ability to demonstrate firsthand the intrinsic benefits of a whole-farm approach. They were the 2023 overall winner of the UK's premier dairy industry awards – the Cream Awards – where they were recognised for reducing the carbon footprint of their activities, improving carbon sequestration and enhancing biodiversity.



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A close-up, high-contrast photograph of a cow's face, focusing on its eye and the texture of its fur. The cow is looking slightly to the left.

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