

Livestock

MATTERS

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Inside this issue:

Dairy cow health

Advice on care of the transition cow, focusing on managing body condition score and negative energy balance.

Calf shed design

Behind the scenes at Gold Cup finalist, James Tomlinson's farm where we learn more about calf rearing on the farm.

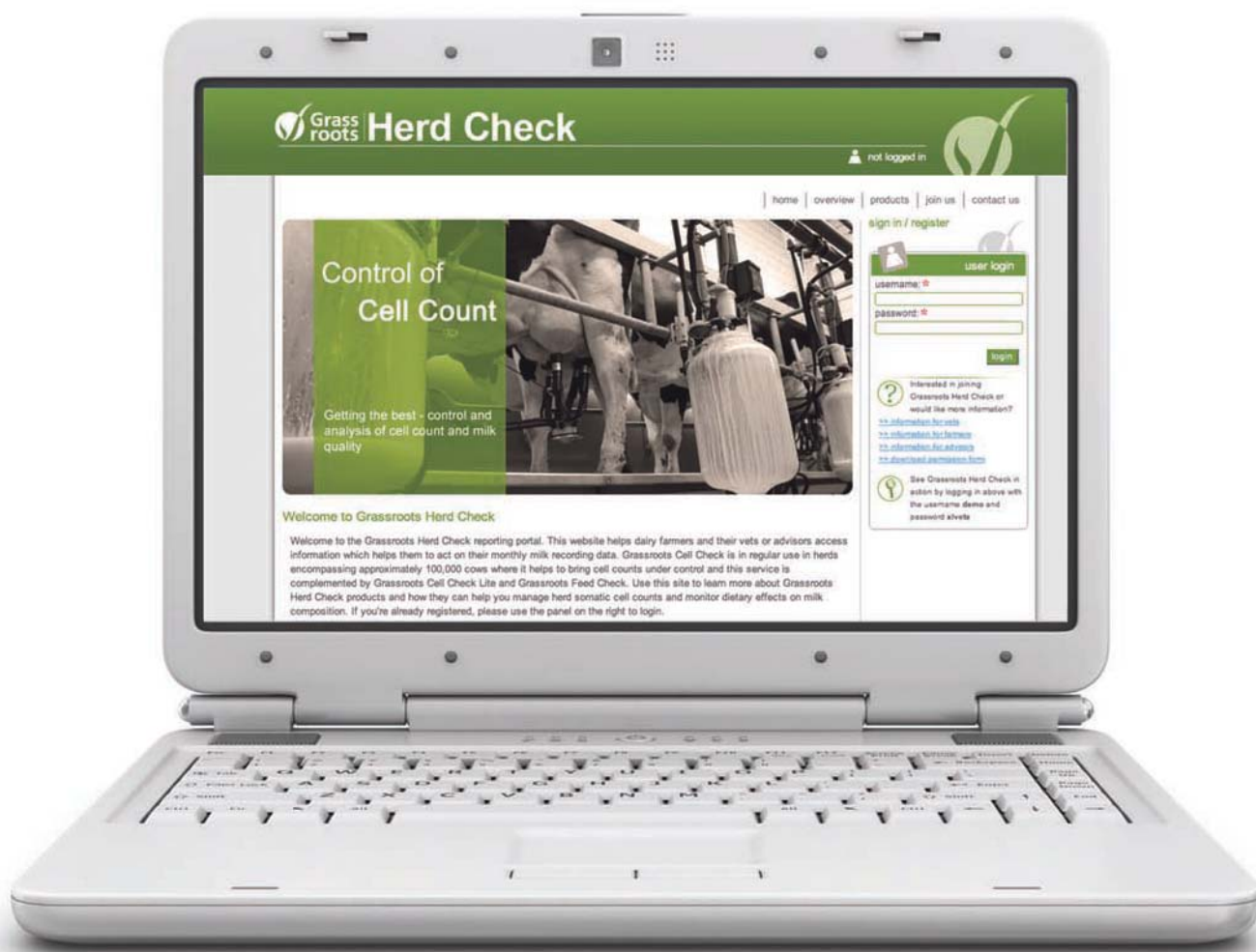




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Livestock Matters is published by:
XLVet UK Ltd, Carlisle House
Townhead Road, Dalston
Carlisle CA5 7JF

Tel: (01228) 711788

*This publication is supplied free of charge to farm clients of XLVets member practices.

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THE EDITOR

Welcome to the 'Spring' issue of Livestock Matters

In this issue we have the second two articles from the XLVets international farm meeting that took place in Cork in the Autumn.

The first takes a look at how we can avoid lameness by focusing on cow flow and considering roadways and cow track design. In the second article we have advice on care of the transition cow, concentrating on managing body condition score and negative energy balance.

We also take a look behind the scenes at Gold Cup finalist, James Tomlinson's farm and learn more about calf rearing on the farm. With lambing well underway for many, James Batterham from Fenton Vets guides us through giving lambs the best start and tips for rearing healthy lambs.

Finally we welcome our two new 'Student Diaries' columnists; Alice, who is in her third year at Edinburgh University and Antonia, a veterinary student at the Royal

Veterinary College, who is also the proud owner of a small herd of dairy goats. Over the coming issues Alice and Antonia are going to take us through a year of their studies and give us an insight into life as a vet student at their respective universities.

We hope you enjoy this issue.

Joanne Sharpe XLVets



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A new calf shed for award-winning dairy herd has benefits for both calves and calf-rearer!

Ian Cure, Lambert, Leonard & May reports from Bilsborrow Hall Farm near Preston on the results achieved since the installation of a new calf shed and we see how these changes led to them being runner-up in last year's NMR/RABDF Gold Cup award.



Royal Veterinary College (RVC) Careers Fair



Lucy Millard
Drove Vets

On 8th January, volunteers from Drove Veterinary Hospital, Endell Veterinary Group and Synergy Farm Health attended the RVC Careers Fair to talk to current students about the benefits of working in an XLVets practice.

After talks on the current student curriculum and facilities at the RVC, the students headed for the exhibition area. The fair was extremely well received with 300 students from veterinary medicine, nursing and biosciences courses in attendance. Many of the students we spoke to were already familiar with the XLVets brand and several had used the XLVets VetEMS website to find placements. The hot topic of the evening was definitely how to pursue a career in farm

animal medicine and as such there was a lot of positive interest in the XLVets farm vets graduate development programme.

Overall, the evening was a huge success and it was great to have the opportunity to talk to so many enthusiastic students. I'm sure we'll be back there again next year!

Thanks to XLVets members Jess Kirby, Cerrie Perrett, Andrew Davies, Gareth Foden and Robert Goss for their help at the event.



The Association of Veterinary Students (AVS) Congress, Nottingham Vet School

25th & 26th January 2014

Katie Fitzgerald Bishopton Veterinary Group

Gill Whitehurst from Glenthorne, Emily Robinson from Scarsdale, Vickie Moreleigh from LLM, myself and Celia Maddock from Willows (not pictured) recently rolled back the years to attend the AVS congress of behalf of XLVets.

On Saturday students had the opportunity to browse the careers fair where the XLVets team manned the stand to meet our potential future colleagues and provide them with the opportunity to learn more about XLVets and ask any questions they had.

Celia then delivered a practical workshop on bovine claw trimming which was well attended by future farm vets keen to hone their skills. As a recent Nottingham graduate, I spoke to the delegates about the move from being a vet student to a vet in practice, during which I provided students with advice for selecting and getting the most from their first job and gave them some of the tales from my first year in practice.

Overall the weekend went very smoothly; it was enjoyed by all who attended and was a great opportunity for XLVets to talk to the vets of the future.



OvertheCounter Awards

The industry celebrated the ninth OvertheCounter awards on the 23rd of October, at the London Marriott County Hall.

OvertheCounter Awards 2013

The awards were given to SQP'S, advisors and businesses that go the extra mile, demonstrate excellent knowledge transfer to customers and have a real passion for the industry. They all play a significant part in helping safeguard the health and welfare of livestock, equine and companion animals across the UK.

Congratulations go to the following XLVet members who all won awards on the night:



Marie Rippingale, Scarsdale Veterinary Group, on being awarded winner of the **Farm Vet Veterinary Nurse of the Year**



Mark Pass, Willows Veterinary Group, on being awarded winner of the **Elanco Farm SQP of the Year**



David Mulligan, Parklands Veterinary Group, on being awarded winner of the **Merial SQP of the Year**



Alison Holloway, Fenwold Veterinary Practice, on being awarded winner of the **Harper Adams University Mastermind Award**



Mark Pass, Willows Veterinary Group, on being awarded **Highly Commended, MSD Tradedge customer care award**



FAVS Congress 2014

By Oliver Tilling, Shepton Veterinary Group. The third annual Farm Association of Veterinary Students (FAVS) Congress took place at the University of Bristol on the weekend of 8th and 9th February.

FAVS was established to allow vet students with a particular interest in becoming farm vets upon qualifying to further their knowledge and experience in this area. Each of the seven vet schools has its own association which runs lectures and practicals throughout the year for those students who wish to focus more on farm vetting. It is important to note that students do this in their own time and are responsible for the organisation of all events themselves.

The Bristol FAVS organised this year's congress held at the Langford site of the University of Bristol. Attended by over 150 students, high praise must go to the Bristol committee of students for organising the event, plus all the students who travelled from each of the seven vet schools to attend - some even flew down from Scotland!

Keen to be involved in the development of new talent and potentially meet future colleagues, XLVets had a strong presence at the event. As well as having a trade stand for students to visit, several lectures and practicals were run by vets from XLVets practices giving up their

free time to get involved. Several members from industry were also represented as well as numerous veterinary societies. Lecture streams included deer health and disease, responsible use of medicines in farm animals, lameness, calving, calf pneumonia, the sheep calendar as well as expectations of a new graduate - what farmers want! Practical streams included lameness, fertility, mastitis, sheep, goats and camelids, infectious disease, chickens and pigs.

There was also plenty of time for students to spend on trade stands; discussing anything from technical issues to their aspirations for life in practice with representatives from industry and farm veterinary practice. Plus of course there were social events including black tie dinner and ceilidh to allow further exchange of ideas.

As veterinary practice becomes more specialised it was fantastic to see students seizing the initiative and organising their own events to better prepare themselves for life in practice and out on farm.



Oliver Tilling, Shepton Veterinary Group and Anthony Wilkinson, Friars Moor Veterinary Clinic representing XLVets at FAVS Congress



Peter Morley, Alex Perkins and Elspeth from Shepton Veterinary Group on the XLVets stand



Peter Morley and Oliver Tilling from Shepton Veterinary Group on the XLVets trade stand



Oliver Tilling from Shepton Veterinary Group lecturing students on: A New Graduate's approach to calf pneumonia

Farmer's question time

By Neil Fox, Endell Veterinary Group. On Wednesday 11th December Endell Veterinary Group hosted a client meeting with an exciting new format. The idea came from two of our vets, Neil Fox and Jim Willshire. Neil organised the evening with the help of our new Livestock Technician, Barry Ewens.



Based on the popular BBC 'Question Time' show, a panel of six agricultural experts were invited to answer questions from Endell Veterinary Group's farm clients. The evening was chaired by Endell's vet Jim Willshire at the Salisbury Livestock Market. The panel was as follows:

- **Keith Cutler** MRCVS (Farm Animal Partner, Endell Vet Group)
- **Richard Young** (The Sustainable Food Trust)
- **Dr Andrew Paterson** (AHVLA South East Regional Veterinary Lead)
- **John Elliot** (NFU Mutual Non-executive Director)
- **Alan Wight** (Pathologist at AHVLA Winchester)
- **Minette Batters** (NFU County Chair and founder of Ladies in Beef)

Following, a mulled wine and Christmas buffet reception the audience made their way into the main meeting hall. There was lively discussion all evening as the panel

debated questions on multiple subjects including Bovine TB, encouraging young people to work in farming and antibiotic resistance.

In particular, Andrew Paterson (AHVLA) and Richard Young (Sustainable Food Trust) both impressed by answering a number of difficult questions from the floor. Richard on many occasions offered an alternative viewpoint and managed to get his opinions across with both passion and empathy. Andrew's discussion on the holistic approach of the AHVLA to control and eradication of Bovine TB by working with all aspects of disease control was well received by the audience, despite initial scepticism. There were also a number of positive opinions on the future of farming and the opportunities available to the livestock industry. Minette Batters suggested that English farms should follow the lead of Scottish and Irish farms and brand their products collectively to gain a premium. John Elliot spoke of the increased standards of living across the world and how this will

lead to greater consumption of meat and dairy products providing an opportunity for British farms.

In summary, the meeting was extremely successful and our clients who attended had a great evening. The practice intends to build on the success of the evening with a second 'Question Time' event next year.



THE
GLENTHORNE
VETERINARY GROUP
EXCELLENCE IN ANIMAL CARE



Veterinary surgeon **John Cammack**

XLVets practice **Glenthorne Veterinary Group**



John Cammack
Glenthorne Veterinary Group



Brian Archer Grange Farm

JOHN CAMMACK, GLENTHORNE VETERINARY GROUP

Cattle healthcare and management

A look behind the scenes at the healthcare and management of a top-yielding British Friesian herd.



John Cammack, Stockman Eric and Brian Archer

Derbyshire farmer Brian Archer has stayed loyal to the British Friesian breed, and is enjoying the benefits of having hardy, healthy and productive cows; the pedigree Collycroft herd is yielding over 8,400 litres/cow, all from a grass-based system.

Brian receives ongoing preventative veterinary care and advice from his vet John Cammack of Glenthorne Veterinary Group. John visits Grange Farm every month to carry out fertility checks, with extra visits made when other health or welfare issues arise.

Why Friesians?

Why Friesians and not Holsteins? Brian explains: 'Firstly, I was brought up with them. And secondly, the operating costs of a Friesian - the milk yield versus the feed energy required - are much better, and they have a lower replacement rate. The bull calves are also more valuable; we rear these to 12 months on a bull-beef system, and then sell them deadweight.'

At Grange Farm, just south of Derby, Brian's pedigree Collycroft herd was the highest yielding British Friesian herd recorded by NMR for the 12 months ending September 2013. It averaged 8,465kg/cow of milk, with 3.96% butterfat, and 3.30% protein. This was particularly impressive as it was achieved with a simple system of cows grazing in the summer, and receiving a grass-based forage ration in the winter. Cake is fed according to yield in the parlour.

'Our highest yielding cow in the herd is in her fourth lactation, and has just peaked at 60 litres/day. She is predicted to give 13,374 litres in the lactation, with 4.3% butterfat and 3.28% protein,' says Brian.

"Friesians are also a lot harder than Holsteins."

The oldest cow in the herd will be starting her 14th lactation in March 2014 - prior to that her lifetime production has been 114,647 litres of milk.

John agrees: 'As a breed, the Friesian has very few health problems. There is very little post-calving or metabolic disease here. In fact, the herd has only had two LDAs in the past 12 years, and both cases were after cows had given birth to twins.'

Nor is lameness an issue at Grange Farm. Brian and John attribute this in part to the breed, but also the regular hoof-trimming that is carried out by stockman Eric Tunstall. This includes the routine trimming of all four feet when cows are dried off.

The herd calves all year round, and in the last NMR-qualifying year, the calving interval was 408 days. The 100-day in-calf rate is 45%.

John says: 'The calving interval could be lower, but because of the very good pedigree bloodlines, some cows are kept on and given further chances to conceive.'

'The good calving interval is testament to the excellent stockmanship of Brian and Eric. Heat detection is all done by eye - watching cow behaviour, rather than using monitoring devices.'



As a routine teats are dipped in foam pre-milking

Disease control

Brian keeps the herd closed; it is vaccinated for BVD and leptospirosis, but not IBR as it has tested clear of this disease. A 30-cow screening for Johne's disease has also been carried out - targeting the older and high risk cows - and the results were again all-clear.

In the past, there have been problems with pneumonia in housed calves. There is now a pneumonia vaccination programme for all youngstock during the winter months.

Despite being a closed herd with no sheep, liver fluke entered the herd a few years ago. It is thought fluke-infected snails were washed onto the grazing ground which floods regularly.

John says: 'We confirmed there was active fluke infection through routine screening of the bulk milk, and finding eggs in the dung of some scouring cows. Cows are now

treated at drying off with a flukicide, and all youngstock are treated two months after being housed.

Youngstock graze a separate block of land, away from the main farm and the milking herd. Last year, during a routine pre-movement TB test, a single heifer was identified as a TB reactor. As the site had the same holding number as the farm, it meant that the whole herd had to be shut down.

Fortunately, the following two TB tests have been clear, and now Brian is free to sell animals again. Meantime there are some knock-on effects for herd management and health.

Brian explains: 'Part of the business here is selling replacement heifers - we usually sell 40 to 50 freshly calved heifers each year.

But with the shutdown, we have had to hang onto them and will be selling them as second calvers. This means we currently have 180 cows on the farm, and not the usual 150.'

John adds: 'Problems with stocking density often occur on farms which have been shut down with TB. In Brian's case, it's slowed the improvements we were making in reducing clinical cases of mastitis.'



Bull beef cattle are reared and sold deadweight at 12 months

Environmental mastitis

In 2011, Brian invested in a bigger cow shed, fitted out with cubicles which were also larger than before, as Friesians are bigger animals these days. The new cubicles are lined with a continuous rubber mat onto which sawdust and lime are put twice a day. This new accommodation is reserved for the high yielders and heifers, whilst the low yielders are kept on straw yards.

It was also hoped that the extra space in the shed and the better cubicle bedding would help reduce the incidence of mastitis, especially during the winter months.

John says: 'Cell counts are relatively low - not rising above 150,000 cells/ml. However clinical cases of mastitis are higher than we would like to see. In the

last year, the rate averaged 60 clinical cases per 100 cows.

'Having a reasonable cell count but a higher mastitis incidence when cows were housed, indicated environmental mastitis pathogens were the likely cause. Milk testing of clinical cases confirmed *Strep. uberis* as the main culprit.'

Brian has stepped up his mastitis control by introducing the use of a teat sealant at drying off in addition to using a long-acting intra-mammary antibiotic. However, having extra cows in the herd has put pressure on stocking levels, and this in turn has put pressure on hygiene.

John comments: 'Once stock numbers have come down, and with the new cubicles and new teat sealant, then I expect the clinical cases to fall.'



The Collycroft herd of British Friesians



Larger cubicles for today's larger friesians



Cows in new shed

Future plans

Thanks to the hardy nature of the Friesian breed, the now well-established disease prevention measures, and the good stockmanship, there are rarely any health crises for John to sort out! However, Brian and John do want to put some more focus into reducing mastitis incidence.

John explains: 'Brian and his team are already very thorough with the milking routine - using both a pre-milking foam and also post-dipping. This year we are going to look into installing a cluster disinfection system, perhaps with the help of an RDPE grant. The goal is to reduce mastitis cases to no more than 40 clinical cases per 100 cows per year.'

Farm facts

(NMR Production figures for year ending September 2013)

- Milking cows 134 (41 heifers)
- Calving index 408 days
- Milk production 8,465kg/cow
- Butterfat 3.96%
- Protein 3.30%
- PLI £45

Avoiding lameness through attention to farm roadways and an understanding of cow behaviour

The incidence of lameness caused by white line disease is affected by the design and condition of farm roadways and cow tracks, together with the manner in which cows are moved from field to parlour.



Tom Ryan of Teagasc, (Ireland's Agriculture and Food Authority) and XLVets' Ger Cusack of Comeragh Veterinary Practice in Ireland, had some practical advice for farmers.

Good cow flow

Ger, using studies of cow behaviour carried out by New Zealand lameness specialist Dr Neil Chesterton, gave an overview of cow flow and how the 'pecking order' in herds affects walking speed.

'Cows are large heavy animals so they move slowly,' said Ger. 'They prefer to walk on flat surfaces - and they walk with their head down, checking the surface ahead of them. They select the spot where they want to place a front foot, and then the hind foot will be placed in the same spot.'

'So cows need to be allowed to move slowly. They like plenty of space, so they can select where they place each of their front feet. They don't like tight corners or steep slopes.'

'And they certainly don't like to be pushed to walk faster, because this means they don't have time to look where they put their feet, and can end up stepping on sharp stones. This is when lameness problems can arise as a result of white line disease.'

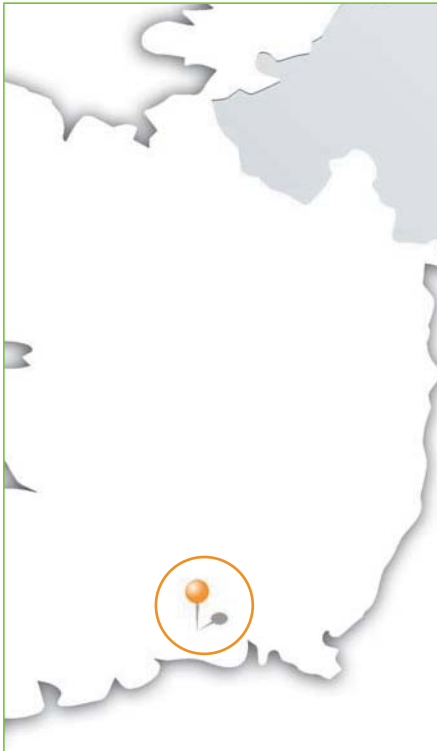
What is white line disease?

A cow's hoof has two main areas; the wall which forms the visible outer part of the claw and bears most of the weight, and the sole which is the undersurface of the claw.

There is a fibrous join between the sole and wall and this is called the 'white line'; this is the weakest area of the hoof. In white line disease, this fibrous junction becomes damaged and the sole separates from the wall, allowing foreign materials to penetrate. This can lead to infection and abscesses.

White line disease is a major cause of lameness, especially of older cows. Incidence can be greatly reduced by ensuring that cows are not forced to move rapidly, or twist on their hooves. Maintaining non-abrasive walking surfaces is also essential.

Mild cases can be resolved by a skilled hoof trimmer, more serious cases require veterinary intervention.



Veterinary surgeon **Ger Cusack**

XLVets practice **Comeragh Veterinary Practice, Ireland**



Tom Ryan
Teagasc



Ger Cusack
XLVets Ireland



Herd dynamics

'But there's not just the individual cow to consider,' said Ger. 'There's a pecking order in herds and the dominant cows have an influence on the way the whole herd moves.'

'When walking on a roadway, around half the dominant cows will be in the front third of the herd. The rest are spread throughout the group. These cows control the walking pace of the herd.'

'Dominant cows draw cows behind them as they walk forward and cause cows in front of them to move along, often by butting them. If a dominant cow stops, then the cows behind will bunch up and stop too. Cows in front also tend to slow down and even stop, apparently waiting.'

'Pushing the cows at the back of the herd to hurry up - using quad bikes or dogs - will only cause the herd to bunch up in the middle. The "pacemaker" cows at the front, will be largely unaffected.'

Ger warned: 'Cows need to be allowed to walk at their own pace. Hassling the rear of the herd will not get the first cow to the parlour any sooner!'

'Secondly, giving them the time to see where they are placing their front feet will prevent hoof damage from stones and the possibility of lameness from white line disease developing.'

He added: 'When cows have a level, well-drained non-abrasive surface to walk on that is wide enough for the size of the herd, the average flow rate may be up to three miles per hour.'

Farm roadway design

Teagasc's Tom Ryan specialises in design and construction of farm buildings and roadways.

He explained: 'Having a good system of roadways and cow tracks on a farm has many benefits; grazing management is easier, less grass is spoiled, cow flow is faster, and overall efficiency is improved.'

Cow tracks can be narrower (1.8m to 2.4m) than the main farm roadways, and the layer of hardcore material, shallower (15 to 20cm). Cow tracks are a cost-effective way to improve access to grass, particularly on heavy land, where a more intensive roadway system is necessary.

'A good roadway will be raised above the grazing area and have a smooth surface, a crossfall to shed water, and sweeping bends at corners and junctions. It also needs to be sufficiently wide for the herd, typically 4-6m. Ideally, it's also best to avoid sharp bends, narrow sections, muddy areas, and distractions such as water troughs.'

Tom said that for paddock-grazing systems, as a rule of thumb, the area taken up by a farm roadway system should be 1.3% of the grazing area it services, and the paddock should extend no more than about 150m towards the fence at the back. On heavier soils, ideally roadways should take up 2% of the area and extend about 100m to the back of each paddock.

Road surface quality

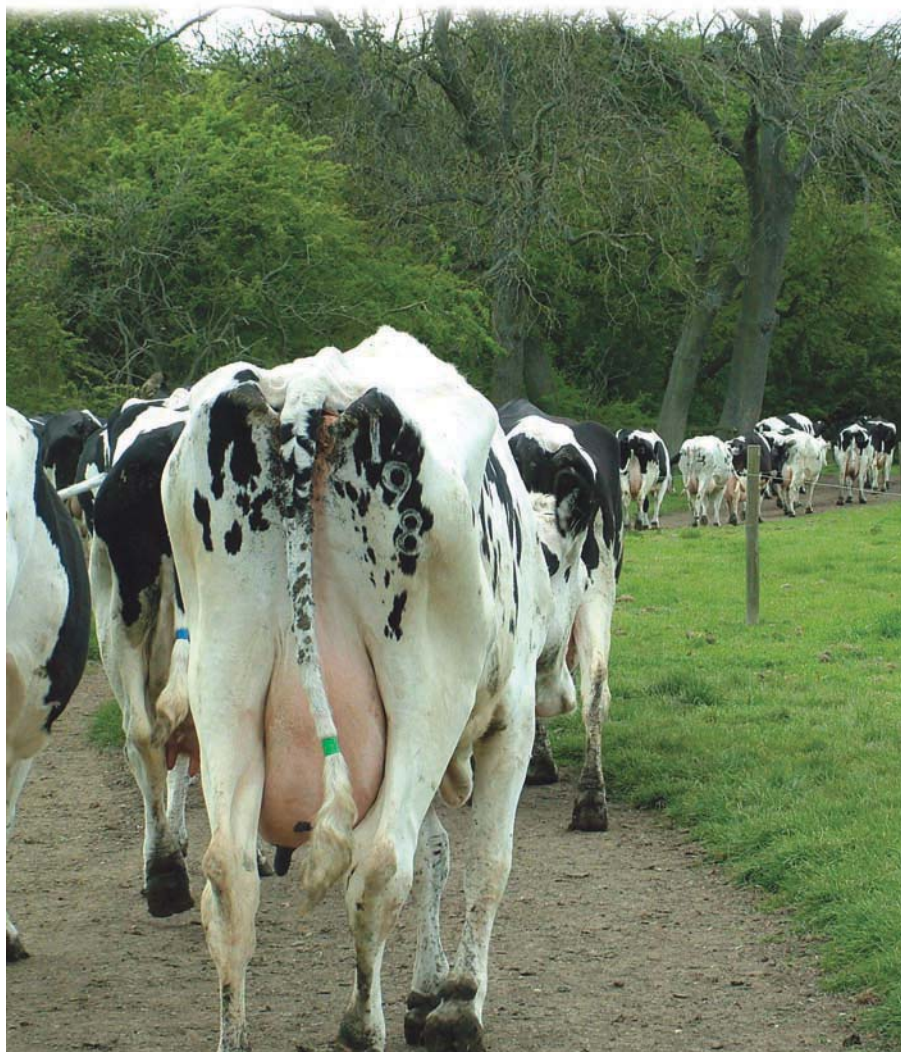
Tom explained: 'The voluntary walking speed of the herd is also affected by the quality and uniformity of the walking surface because cows will be looking to find a "safe" spot to place each foot.'

'The material used to make the "dusty" surface layer should have a pebble size no

larger than 5mm. Limestone is not a good choice as it dissolves in rainwater. Instead consider using shale, red sandstone or greywacke dust. But take a look first before buying, as quality can vary!'

See panel opposite for more advice on designs of roadways and tracks.





Design tips for roadways and tracks

- **Width:** 3.5-6m for roads; 1.8-2.4m for tracks
- **Depth:** at least 30cm of hardcore, and 5cm of 'dust'
- **For surface layer:** use dusty material with maximum pebble size of 5mm
- **On steep sites:** use ramps or channels to divert water at intervals
- Make roadways/tracks wider at corners and T-junctions
- Site water troughs away from the road



- Regularly assess to spot emerging defects
- Keep well-maintained - especially heavy cow traffic areas

...and to the parlour

On the approach to the parlour from the field, Tom recommended a concrete stretch of roadway. This needed regular scraping or sweeping to remove stones on the surface so as not to disrupt cow flow or cause lameness.

He also advised: 'At the entrance to the collecting yard, it's a good idea to put a kerb; this forces cows to lift their legs and stops grit from being flicked forward by cows. The roadway should also widen to compensate for cows having to slow down.'

Ger added: 'The walking order of cows differs slightly from the milking order. So once they have entered the collecting yard, they need space and time to rearrange themselves before they enter the milking parlour.'



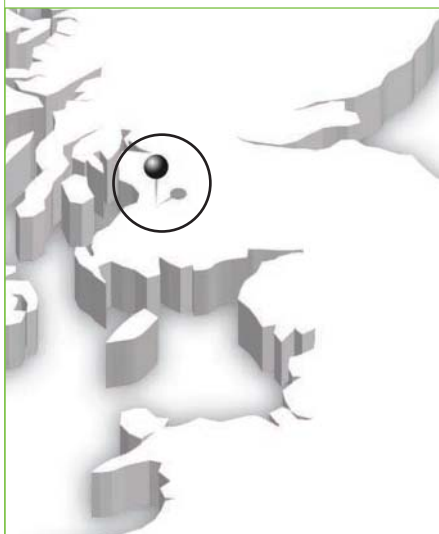


Dr Finbar Mulligan School of Veterinary Medicine, University College Dublin



Seamus Finnegan Armour Veterinary Centre, Ayrshire

AC ARMOUR VETERINARY CENTRE



Veterinary surgeon **Seamus Finnegan**

XLVets practice **Armour Veterinary Centre**

Protecting dairy cow health and production in the transition period: assessing negative energy balance and monitoring body condition

Amongst the presenters at XLVets' annual conference in October last year, was Dr Finbar Mulligan from the School of Veterinary Medicine, University College Dublin.

Dr Mulligan gave an overview of the nutrition and production diseases of the transition cow. Below are some highlights from his presentation on negative energy balance (NEB) and body condition scoring, with comments from XLVets' Seamus Finnegan of Armour Veterinary Centre in Mauchline, Ayrshire, who was one of the delegates at the conference.

Transition cow care

The transition period of the dairy cow is the period from three weeks before calving to three weeks after. Dr Mulligan pointed out that this is an important time in the cow's production cycle as it is when production diseases, such as ketosis, milk fever and LDAs are most likely to occur.

'Ensuring that cows have the right energy status and are receiving the appropriate nutrition and management during this time it is key to protecting their subsequent health, fertility and production,' said Dr Mulligan.

Negative energy balance

Cows enter into a negative energy balance immediately after calving where the energy demands of milk production are greater than the energy intake. During this time, the cow mobilises her body fat reserves to meet demand.



Dr Mulligan explained the main consequences of a negative energy balance were a suppression of the immune system, clinical and sub-clinical ketosis (both of which negatively impact on feed intakes and increase the risk of displaced abomasum), reduced milk yield and depressed fertility.

The control strategies for NEB included genetics, milking frequency and the nutrition of the cow before and after calving. However, one of the most important nutritional means of altering energy balance in the lactation is by altering her body condition at calving.

Monitoring body condition scores

The body condition of a cow is a reflection of her historical energy balance, explained Dr Mulligan. Subjective visual assessments of the herd can be made at key points of the production cycle. Several scoring systems are available and Dr Mulligan favoured a scale of 1 to 5 where 1 was emaciated, and 5 was obese.

Dr Mulligan said: 'In Ireland in March of 2012, because milk production of the Irish herd was close to the milk quota threshold, many cows were dried off early. However, the extended dry period meant that many became over-conditioned. This reduced feed intakes in early lactation, and negatively affected fertility hormones.'

A low body condition score at calving also has negative effects on health and production. 'At least 95% of the herd should be calving with a body condition score (BCS) of at least 2.75,' said Dr Mulligan. 'Where poor nutrition and/or health have resulted in a poorer condition then nutritional anoestrus and lower milk yield can be expected.'

He recommended that scoring should be carried out five times in a cow's lactation cycle; at drying off, at calving, at pre-breeding examination, when AI'd, and it was also vital to check BCS in late lactation, 100 days prior to being dried off.



Body condition scores can be easily measured and recorded during routine fertility visits

'Cows should be assessed by palpating them - not just by looking at them,' he advised. 'Then the percentage of cows that are off-target should be calculated to determine whether changes to nutrition or management are needed, and when.'

Dr Mulligan's recommended targets through the cow's production cycle are shown in Table 1. He commented: 'There's nothing wrong with having a boring BCS profile!'

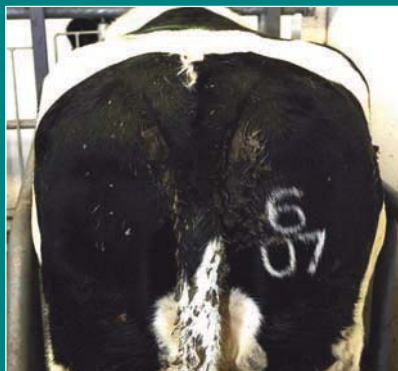
Body condition scoring was very easy to learn, said Dr Mulligan, and farmers should seek training. They should carry out scoring and review the results with the farm's vet who should in turn ensure the subjective assessments have been made accurately. He said vets should be invited to inspect close-up and far-off dry cows, as a matter of routine.

XIVets' Seamus Finnegan of Armour Veterinary Centre in Mauchline, Ayrshire is in agreement

on the value of body condition scoring, and in training and encouraging farmers to make their own assessments at key points in the lactation cycle. He says: 'Taking the time to assess cow condition is time-consuming, but there is a cost benefit in doing so.'



Condition scoring



An overconditioned cow

Table 1: Target BCS for dairy cattle (scale 1 to 5)

Drying off	2.75-3.0
At calving	3.0-3.25
At breeding	Minimum 2.75
At 150 days in milk	2.75-3.0
At 200 days in milk	2.75-3.0
At 250 days in milk	2.75-3.0

Metabolic profiling

On farms which have recurring health problems during the important transition periods, he advises a full metabolic profile be carried out. 'This involves body condition scoring as well as the blood sampling of cows (in dairy herds, three separate groups of cows). The latter provides vital information on energy levels, protein and mineral status of the herd.'

'This can sometimes be seen as an unnecessary cost, however it is useful for a number of reasons,' says Seamus.

'Firstly, monitoring cows using metabolic profiles allows us to check that both the milking cow ration and the late dry period ration are doing exactly as expected. Any problem that's then identified can be sorted out by making changes to the diet.'

'Cows that calve down in the correct body condition will have a greater dry matter intake, as a percentage of their body weight. So keeping track of BCS will help alleviate many of the metabolic diseases associated with early lactation.'

Forage quality can be a factor

The winter of 2012/2013 presented a particularly difficult set of circumstances for farmers in many parts of the UK, including Ayrshire. Seamus explains: 'Cows were housed very early and were in poorer body condition. Some of the leaner cows could have been dried off earlier than normal so that they could make up their lost body condition.'

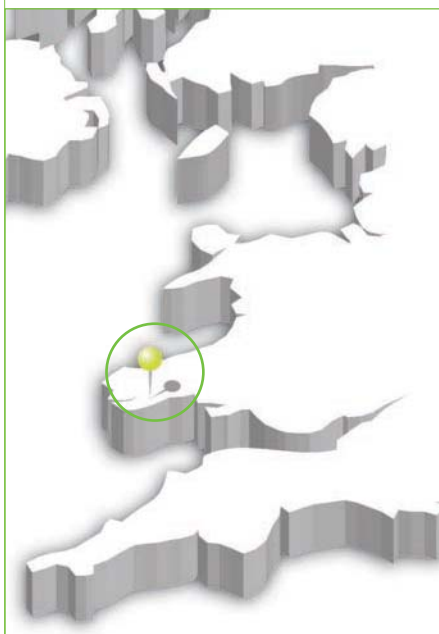
'Dry cow rations were particularly hard to make up due to the poor quality forage available. The late spring of 2013 exacerbated these issues.'

'Fortunately the quality of forages made for the winter 2013/2014 is greatly improved, both in dry matter and energy content, although first cut silage was lighter than would have been anticipated. Cows were also housed in better body condition than the previous winter. So this last winter we have seen reduced numbers of metabolic conditions and hence associated diseases.'

Three-way team approach

Dr Mulligan and Seamus both agree that it's best to take a team approach to protecting dairy cow health and production in the critical transition period; farmers should be consulting with both their vet and nutritionist together, as no one person will have all the solutions.





Veterinary surgeon **Josh Batterham**

XLVets practice **Fenton Vets**



JOSH BATTERHAM, FENTON VETS

Giving lambs the best start

A great deal of care and effort goes into successfully rearing a healthy lamb from birth to slaughter. In order for this to happen as economically as possible, there are a number of potential pitfalls that must be avoided along the way. Since prevention is almost always cheaper than treatment, the wise man will focus on getting husbandry, nutrition and biosecurity sorted as a matter of urgency.

Before lambing

The strength and viability of a newborn lamb will be determined by the health of the ewe during pregnancy. Although it is outside the scope of this article, it is essential that the ewe's nutrition (especially in the latter third of pregnancy) is carefully calculated to provide the adequate energy, protein and trace elements required to support both the growing foetus, and to maintain reasonable condition of the ewe. Scanning ewes to enable managing singles and triplets in separate groups will not only help minimise twin lamb disease but will also avoid the overfeeding of singles (and barreners).

Several diseases that classically cause abortion in ewes are also capable of causing the birth of weak or stillborn lambs. One such disease would be Borders Disease which classically is seen as 'hairy shaker' lambs. Advice should be sought from your vet if you see these for the first time, as it can quickly become endemic within a flock. Lambs born weak due to disease/malnutrition of the ewe will struggle right the way through to slaughter, so looking after your ewes pre-lambing is essential.

At lambing

At lambing time, husbandry practices are key to preventing disease outbreaks. Simple measures such as keeping pens clean and ensuring adequate colostrum intakes will all help to boost the lamb's immunity and reduce the inevitable disease challenge around them. Both watery mouth and navel ill are diseases associated with inadequate colostrum intake, poor hygiene and/or high stocking density. The importance of early and adequate colostrum intake should never be underestimated. Every lamb should receive two pints (one litre) of colostrum in the first 18 hours. Half of this (one pint) should be in the first six hours of life, split between two feeds. All navels should be dipped in an iodine based solution as soon as possible after birth, and ideally again at 24-48 hours. Stress also causes a drop in immunity so docking, castration, vaccination and turn out all at once should be avoided if possible.



After turnout

Clostridial disease can be an issue on some farms, with pulpy kidney and lamb dysentery claiming a few lambs each year on many unvaccinated farms. Ewe vaccination with a combination clostridia/pasteurella vaccine 4-6 weeks prior to lambing will protect the ewe for 12 months, and lambs for 12 weeks from Clostridial diseases, and Pasteurella for four weeks, providing they receive colostrum from the ewe. It is recommended that lambs be vaccinated from 12 weeks for continued protection.

Assuming all has gone well at lambing and a healthy lamb flock has been turned out, the two main problems seen in growing lambs are parasite burdens and nutritional deficits.

Nematodirus battus is high on the list of suspects when it comes to scouring lambs, alongside high *Trichostrongyle* counts and *Coccidia*. *N. battus* has a direct life-cycle from one year's lamb crop to the next via weather resistant eggs that remain on the pasture over winter. Lambs should not be turned out onto pasture grazed by last year's lamb flock if possible and regular faecal worm egg counting should be performed to assess worm burden and monitor wormer efficacy. A free parasite forecast is available on the NADIS website and is well worth reading whilst you have lambs at pasture.

Coccidiosis is a significant disease that is often overlooked on smaller sheep units but is well worth considering when dealing with scouring lambs. It is usually seen in lambs 4-6 weeks old, often in groups of later lambs, and particularly if stocking density is high or hygiene in the shed (or around feeders in the field) is poor. Coccidiosis is caused by two specific strains of *Eimeria* species which are parasites that live inside cells in the lamb's gut. They multiply within the lining of the gut and cause considerable damage to the intestine. This loss of gut lining causes a profuse diarrhoea and affected lambs will often look dull and anorexic, often with abdominal pain and straining. Severely affected cases may have secondary bacterial infection in the intestine and there may be blood in the diarrhoea. Adult sheep are unaffected by coccidia, as immunity is strong, however they are the main reservoir of infection to lambs, shedding higher numbers of coccidial oocysts in their faeces around lambing. Early lambs will only be exposed to low numbers and will gain strong immunity by eight weeks, however coccidia numbers will multiply up, leaving large numbers on the ground for the naïve later lambs, which may succumb to disease. Concurrent infection with *Nematodirus* is often seen and may mean that only low levels of coccidia are needed to cause clinical

disease. Treatment of severely affected lambs includes administering anti-coccidial drugs, injectable sulphonamides (off-licence) and fluid therapy as directed by your vet. Coccidia are resistant to many commercial disinfectants, however there are several effective products available that clearly state suitability for use against coccidia. Prevention involves improving hygiene and reducing stocking density, as well as turning out later born lambs onto ground not previously grazed by early born lambs. Anti-coccidia (coccidiostat) medications are available that can be added to creep feed, however they will prevent any natural immunity building up, so that lambs will be fully susceptible as soon as medication is stopped.

Nutrition of ewes and lambs after turnout is just as important as worming protocols, and simply turning everything out onto 'lush' spring grass invariably isn't quite enough. Ewes must be supplemented with sufficient feed to sustain milk production for the growing lamb, whilst creep feed must be available in sufficient amounts to maximise growth rates. After discounting parasites and under-nutrition as a cause of poor growth, looking at trace element deficiencies is the next step. The easiest way to do this is by blood sampling a representative group of 10 lambs from the flock to look at blood plasma values for copper, cobalt and selenium/Vitamin E as a starting point. As well as hindering growth, trace element deficiencies can predispose lambs to secondary diseases. There are many ways of supplementing for trace elements, including boluses, licks, injectables and feed additives. It should be pointed out however that a great many farmers are spending huge sums of money on unnecessary supplements, touted by manufacturers as 'essential' and it is well worth knowing what trace elements are required (if any) before blanket supplementation. Boluses and injectable vitamins are the only way of guaranteeing correct dosages are administered if a deficiency is found. It is important to note that sheep (particularly Texels) are susceptible to copper toxicity and care should be taken not to overdose with copper supplements.



Lamb showing signs of abdominal discomfort

Cobalt deficiency signs:

- Loss of appetite
- Slowed growth
- Watery eyes
- Anaemia and anorexia in severe cases

Copper deficiency signs:

- Loss of wool crimp
- Swayback in young lambs
- Slowed growth
- Anaemia and fragile bones in severe cases

Selenium deficiency signs:

- Stiff lamb disease (white muscle disease)
- Sudden death of young healthy lambs
- Slowed growth
- Increased numbers of barren ewes

As well as the direct benefits of fewer lamb losses, ensuring lambs get off to a healthy start will pay dividends in the longer term. This can be seen as improved feed conversion of growing lambs, decreased time to slaughter weight and improved fertility of replacement ewe lambs, to name but a few.

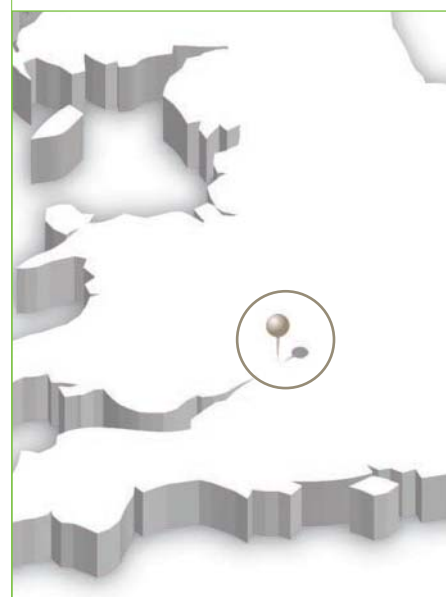
To fully assess the management practices and disease risk on your own farm it is important that you contact your own XLVets practice and your vet will devise a specific flock health plan, tailored to your own circumstances.



DairyCo

Using the DairyCo Mastitis Control Plan has cut the number of clinical cases by two thirds on a Gloucestershire farm.

Knowing where to start is sometimes the biggest challenge when it comes to tackling mastitis, and Gloucestershire farmer, Martin Wooldridge says he's thankful he appears to have started in just the right place.



Veterinary surgeon **Andrew Henderson**
Sean Hughes

XLVets practice **Tyndale Vets**



Andrew Henderson
Tyndale Vets



Sean Hughes
Tyndale Vets

For Mr Wooldridge, his wife Ros and son James, working with their 200-head herd in Nympsfield near Stroud, dry cow management was the first focus of their attention in the campaign to reduce the disease.

Admitting that the incidence of mastitis at one point had reached 120 cases per 100 cows per year, he says that instinct would have naturally led him to consider the routine in the parlour.

Instead, he consulted his vet, Andrew Henderson from Tyndale Vets, and the whole team decided to take a much broader approach.

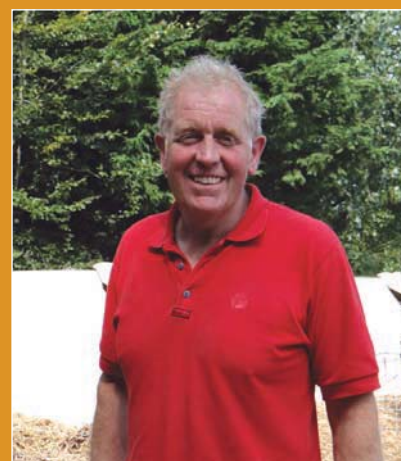
Opting to use the DairyCo Mastitis Control Plan as the framework for the process, he says that from the outset, it began to confirm what they thought was their problem.

'We used to have a lot of cows calving down with clinical mastitis, so when we went through the plan's questionnaire - which delved in great detail into every aspect of the herd's management, often asking questions we wouldn't have thought of asking ourselves it wasn't a great surprise when dry cows were identified as an area for improvement,' says James.

'At the time, cows were calving on straw in the dry cow yard, and moved into another straw yard once they had calved,' he says. 'The calves would stay on the cows for around a week and although they looked clean and comfortable, it's true we didn't clean the yards as often as we should.'

Cross-suckling was also taking place within the group and as Mr Henderson points out: 'This isn't a good idea from a calf disease perspective, and since teat canals could have been continuously open, the cows were also left very prone to udder infection.'

One of the earliest decisions, when the plan began in 2009, was to change the dry cow housing and the calving pens, and a second-hand shed measuring 90 x 45 feet was erected at a cost of around £12,000.



Martin Wooldridge Farmer

We couldn't afford cubicles in the shed at the same time, so decided to loose-house the dry cows on sand,' says James. 'We'd have up to 25 cows in the shed and muck it out twice-a-day with a shavings fork.'

Individual calving pens were also created inside the shed, allowing each cow and her calf to be managed and monitored separately from the group.

The cows under this system are described by the vet as 'as clean as any you'd find' while the response in terms of clinical mastitis was immediate and pronounced.

'We've now done two winters with this system and we haven't had one cow calve in with mastitis during that time,' says James.

The next phase is to install cubicles in this shed which, Mr Wooldridge says, will allow around 40 dry cows to be housed in the same area as the current 25.

'We will add a small loose yard for a maximum of eight cows where they can remain for up to two weeks before calving,' he says.

All of the changes to the dry cow housing are said to have given a far better structure to transition cow management and have allowed a maize and straw-based ration to be fed, rather than grass silage from ring feeders.

And the knock-on effects have been seen through the whole herd.



'Now we're finding it's the small things,' says James. 'Some seem really picky but if we can do 100 small things better we can get the incidence lower still and I can't see why we couldn't achieve 20 cases per 100 cows per year.'

'Whatever effort we have put in has given us something back and that motivates us to keep on going,' he adds. 'Once you start getting the milk back it becomes a lot easier - they calve in well and yield well so everything becomes more interesting.'

From a vet's perspective, Sean Hughes adds: 'The plan has led the team into other areas such as calf and colostrum management which has given them better calves and better replacement heifers.'

'The great thing about the plan is it provides the evidence to point you in the right direction and without it they may not have had the confidence to invest in the shed and they could have gone on for years and not achieved improvement.'

'But this isn't just about the plan,' Sean insists. 'These are highly motivated people who have engaged and want to improve. That's why there has been such dramatic improvement.'



'In almost every respect, things are easier,' says Mr Wooldridge. 'Calvings are easier, there's almost no milk fever, milking is faster, cows are under less metabolic stress and they're far more likely to get in calf.'

'Profitability is far better too, with no yield drop from mastitis, and antibiotic tube use down by 70 per cent,' he says.

'Instead of spending money treating problems, we are preventing them,' adds James. 'In fact we've almost forgotten what to do when we get a sick cow.'

As part of the plan, the parlour routine has also changed which today includes drying off the 9,000 litre herd at slightly lower production and having a better routine for the process.

'Previously we would have just administered dry cow therapy in the parlour during milking, but there was so much going on that we were not properly focused on the job,' says James.

'Now we bring the group back in after the parlour has been washed, teat-dip with surgical spirit, use a dry cow tube where necessary and seal all the teats,' he says.

Today, mastitis rates are running around 40 cases per 100 cows per year and as the plan is reviewed, attention moves to new areas that will further the downward trend.

This includes improved cleanliness and access to drinking water, increased frequency of scraping and improved gateways and farm tracks using oolitic limestone.

The DairyCo Mastitis Control Plan

Stage	Process	On this farm
Stage one: analysis and diagnosis	Milk records are used to analyse cell counts. Initial and recurrent mastitis cases are recorded and plotted graphically.	On Martin Wooldridge's farm, clinical mastitis had risen to 120 cases/100 cows/year, with most cases shown to be of dry period origin.
Stage two: the questionnaire	The farm's vet or consultant asks questions and observes processes to complete the questionnaire. Actions are identified which must, should or could be undertaken.	Improvements made included a switch from straw to sand for dry cow bedding; improved dry cow nutrition; improved drying off routine and limestone gateways and tracks. Cubicles are being installed for dry cows.
Stage three: monitoring	The results of any actions are monitored on an ongoing basis to ensure improvements are made and sustained.	This herd has reduced mastitis cases to 40 cases/100 cows/year; a target of 20 cases is considered realistic and antibiotic use has been cut by 70 per cent.

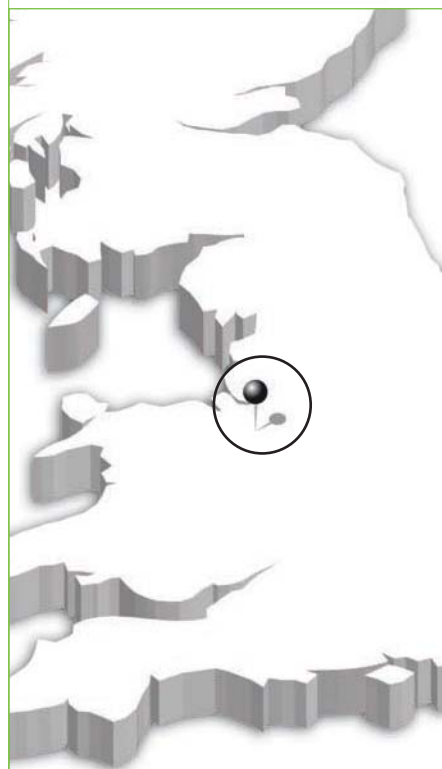
You can check with your vet if your XLVets practice delivers the plan or e-mail mastitiscontrol@dairyco.ahbd.org.uk



NMR RABDF Gold Cup 2013. NMR Silver Salver goes to runners up James and David Tomlinson (centre left and right) with RABDF President David Leaver left and NMR Chairman Philip Kirkham right

Last year's runners-up in the NMR/RABDF Gold Cup were James Tomlinson and his parents David and Sheila, from Bilsborrow Hall Farm near Preston in Lancashire, with their pedigree Bilsrow Holstein herd.

A new calf shed for award-winning dairy herd has benefits for both calves and calf-rearer!



Veterinary surgeon **Ian Cure**

XLVets practice **Lambert, Leonard & May**



Ian Cure
Lambert, Leonard & May



James Tomlinson
Bilsborrow Hill Farm

In the NMR/RABDF qualifying year, the 230-cow herd achieved an average yield of 10,538kg of milk at 4.41% fat and 3.14% protein on twice-a-day milking.

And whilst it is an achievement to admire, many dairy farmers and those responsible for rearing calves, may actually be more envious of the Tomlinsons' new calf shed. Its design is not only proving of benefit to calf health and growth, but it has also considerably improved the working conditions for those rearing them!

XLVets' Ian Cure of Lambert, Leonard and May began working with the Tomlinson family two years ago. He visits every two weeks to carry out fertility checks and advise on all matters of herd health and welfare.

Proactive health care

The herd is vaccinated for BVD, IBR, leptospirosis and is routinely screened for Johne's disease.

Ian adds: 'Some deformed calves were born here last summer. Blood tests confirmed the presence of the Schmallenberg virus. But there weren't any noticeably sick cows and the midges had gone before there was time to vaccinate.'

'So this year we will have a meeting in the spring, to evaluate whether to take preventative action in the summer. It will depend on the level of risk coming over from the Continent.'

Another area where a proactive approach is taken is on lameness. James Tomlinson explains: 'I hate to see lame cows. Here on the farm, two of us have been trained to trim feet, and to make the job easier we bought a new foot crush last year.'

'So if a cow is even slightly lame when she comes into the parlour in the morning, then I make a note, and after she's been milked, she'll get her feet trimmed.'

The herd's cell count of 135,000 cells/ml is achieved through a combination of good hygiene and good milking practice.

Ian says: 'This is a good level of cell count to have - it indicates that cows have an active immune response. A very low cell count (below 100,000 cells/ml) is not always a

good sign. It indicates low levels of immune response in the udder, and this puts cows at greater risk of developing serious E.coli infections.

'Conversely, when cell counts go over the 200,000 mark, then for every further 50,000 cells/ml, a cow's milk yield drops by around half a litre, due to tissue damage in the udder.'

'So having a cell count of 100,000 to 200,000 cells/ml is the ideal trade-off; it puts milk safely in the top payment band for quality, without any yield loss.'



New calf shed



New calf shed

James' mother Sheila is in charge of calf-rearing on the farm. Calves used to be reared in a converted chicken shed; it was dark, had poor ventilation and was difficult to keep clean. As a result, there had been problems with pneumonia and scours.

James says: 'I'm a firm believer that calves are the most important part of the dairy unit - they are the future of the herd. We have made a lot of improvements to the cow sheds, and last year it was time to update the calf-rearing system...besides, Mum was threatening to quit due to the poor working conditions!'



Calves are taken to the pens as soon as they are born

The Tomlinsons wanted a simple system, and James spotted an idea whilst on a farm study tour in Scotland. It was based on starting calves off in individual pens, and then moving the pens but not the calves.

'We decided against hutches, they are great for calves, but with the Lancashire climate, not much fun for the people looking after them' explains James. 'We also looked at automatic calf feeders but we prefer to bucket-feed calves so they get individual attention.'

The shed that the Tomlinsons designed themselves can hold up to 80 calves. It has

five separate bays down two sides, with eight individual temporary pens in each. Calves are taken to the pens as soon as they are born.

When calves are a month old and drinking and feeding well, the pens in the bay are dismantled and removed, leaving the eight calves behind, as a group. They then receive milk and concentrates by trough.

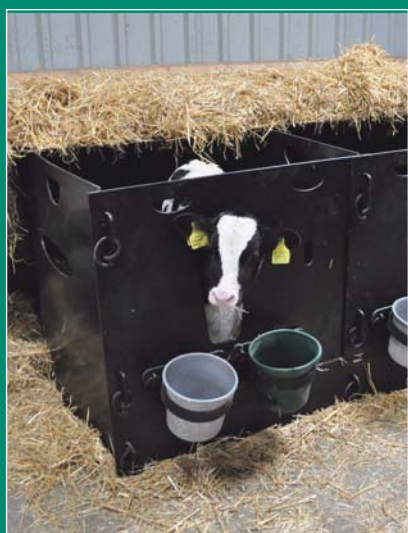
James explains: 'With this system we are never under pressure to move the calves. It has relieved the stress for both my mother and the calves. I've also noticed that calf growth has improved.'



The pens in the bay are easy to dismantle and remove

Ian adds: 'Feed conversion efficiency is highest in calves - around 60%, and then it falls as the animal gets older. Above 12 months of age, cows are only 10% efficient at feed conversion. So getting young animals off to a good start is the most efficient spend of money.'

The shed's ventilation relies on body heat from the calves warming the air which rises out through a roof vent. Fresh air is then drawn into the shed from the walls - there is a six-inch gap between the concrete panels and corrugated tin wall panels.



Calf pens have straw across the top



Ian Cure demonstrates the clear space available in the new calf shed



The new calf shed enables everything needed to rear calves to be under one roof

Ian points out: 'Air flow in the shed is better when it's fuller, as it's quite a big space. With a low number of calves, there wouldn't be the heat created to cause the air to rise and pull in fresh air from around the sides of the building. So there has been the odd case of pneumonia here, although Sheila is always quick to treat it.'

Calves stay in their groups until weaning at three months, and are then moved, still as a group of eight, into an open-sided shed.

James explains: 'In the old shed there was always a scours issue because we couldn't clean the shed properly. But now, after a bay of calves moves on, the pens are mucked out, washed and left clean and dry for a while. There are usually two bays empty at a time. This has taken away the continuous disease pressure.'

The new build has its own supply of hot and cold water. In fact, there's no need to go outside at all, everything that is required for rearing the calves is under the one roof.

James had vowed that when they constructed the shed, that it would be absolutely right. So is it? 'Yes, and when the Gold Cup judges came and looked around our farm last year, one of them said to me 'I want your shed!' More importantly, Mum's still looking after the calves!'

Good colostrum management

Ian adds: 'Another factor which has ensured good calf health is the colostrum management of newborn calves. James calves every cow, and straightaway takes the calf away to its new pen, not letting it suckle its dam. All calves are then given three to four litres of their dam's colostrum within the first six hours of birth.

'If a newborn calf is left with its dam to suckle for the colostrum without intervention, then it will take 45 minutes to suckle just two litres of milk. And that's assuming it's able to stand and suckle continuously for that time.

'However, the quantity consumed in the first feed of a calf's life is important, because after that the colostrum absorption sites start to shut down. So James is taking the right approach - taking the calf away, milking its dam and then returning to give it a single feed of three litres of milk in the first few hours. This is better than lots of short feeds when the calf is left on its dam.'



Contented calves

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	23 April	North Yorkshire	
	28-29 April	Dorset	
	28 Apr-1 May	Cheshire	
 St Boniface Veterinary Clinic	3 April	North Yorkshire Bull Fertility Workshop	Beef
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Dairy cow lameness and foot trimming

Cattle lameness is part of the triad of problems that contribute to disease on farm, and along with mastitis and infertility it can be a serious problem incurring mounting costs, reduced production and fertility problems.

With some herds having lameness rates of 40-50%, this can mean a massive drain on resources as a lame cow increases her chances of being culled six-fold. Since chronically lame cows cannot reliably be transported, many farm clients of XLVets are now reviewing their strategy for tackling the lameness issue and we are seeing a dramatic rise in the number of cows being treated.

The bulk of lameness disease costs are in the reduced chance of conception and greater number of days open. Lameness can reduce conception rate by greater than 25% and increase the risk of ovarian follicular cysts by 2.5 times. Current figures on the DairyCo website suggest that the average cost of an incidence of lameness could amount to £180 equating to a financial loss of £15,000 for an average-sized herd, put another way, that's well over 1p per litre of milk produced on farm.

Treating lame cows is one of the most demanding health issues to be approached on farm, as it is expensive on both time and physical effort. It is therefore very important that efforts are maximised to best effect. Vets often find the best way to investigate the causes of lameness is via a holistic approach that includes a herd locomotion score to gauge the severity and extent of the problem.

Regular foot trimming along with an understanding of the types of lameness, however, can help. All cows should be hoof-trimmed at least once or ideally twice in lactation, even if they are sound. This, along with a structured approach to tackle underlying causes on farm such as cow tracks and building design can help to avoid cases increasing in severity and persistently reoccurring in the future.



The DairyCo Healthy Feet Programme (DHFP) aims to help dairy farmers reduce the number of lame cows on their farms by identifying and applying the right management techniques.

Their website www.dairyco.org.uk has a wide range of practical information on their step-wise approach which helps farmers make important progress towards diagnosing the problems, devising an action plan, and developing the skills necessary for long-term lameness control.

XLVets currently has 30 trained mentors (vets who have completed specialist training) operating across the country. These vets facilitate the whole process and act as one-to-one advisers, or 'mobility mentors' on farm, with resources and information provided by DairyCo to aid with understanding and actions.

The approach is based around the 'four success factors' of;

- Low infection pressure
- Good horn quality and hoof shape
- Low forces on the feet - good cow comfort and cow flow
- Early detection and prompt, effective treatment of lame cows

For further information on having a DairyCo Healthy Feet Programme carried out on your herd, contact your local XLVets practice or visit the DairyCo website.



Alongside an action plan for your herd devised by your vet, FarmSkills offers a range of foot trimming and lameness workshops across the UK from basic herdsman level through to professional standard which train farmers in initial recognition and lameness grading to trimming and treatment. Our workshops are practical and led by our highly qualified and experienced trainers. All our courses run on farm so you get hands-on experience of hoof trimming and care under the best supervision possible.

Trainees will be taught how to identify normal bovine locomotion and the important anatomical features of the bovine foot along with their relation to basic physiological

function. Using this knowledge delegates will be able to describe the four stage Dutch foot trimming method and relate each step to key physiological principles.

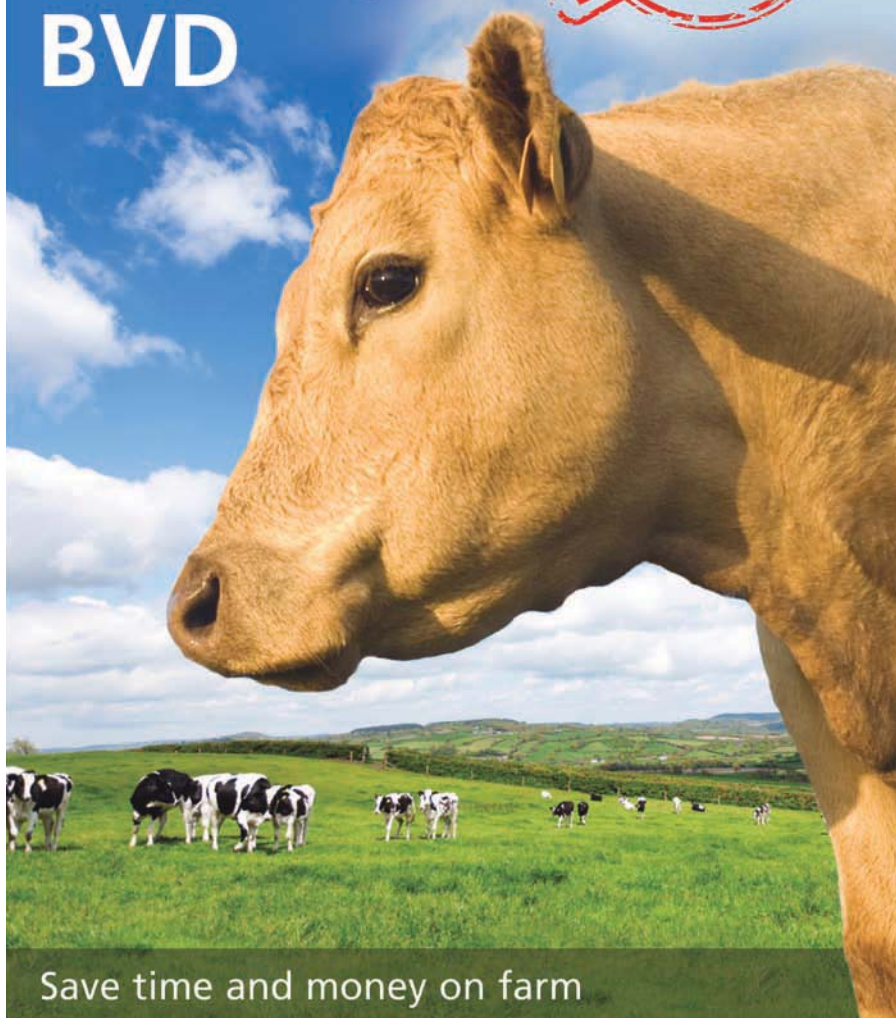
Why not visit our new FarmSkills website www.farmskills.co.uk for further information on our workshops and to see what courses are running in your area. If you would like information please contact the FarmSkills team on 01765 608489.



Our herdsman workshops cover:

- Normal bovine locomotion and relate this to DairyCo mobility score.
- Recognise lameness and grade severity.
- List the key features of bovine foot anatomy and relate these anatomical features to key aspects of physiology - blood supply, normal claw horn growth and overgrowth.
- Understand the theory of the 'Dutch method'.
- How to safely restrain a cow and pick up feet using a foot crush.
- How to apply the theoretical knowledge of preventative trimming practically.
- Practically reinforce the key anatomical and physiological principles and relate this back to the practical application of the 'Dutch method'.
- Recognise the causes of foot lameness in cattle (sole ulcer, white line separation and abscess, digital dermatitis, inter-digital necro-bacillosis, heel erosion, inter-digital hyperplasia).
- Describe the basic aetiology of sole ulcer and white line disease and relate this to anatomy and physiology and the specific risk factors for claw horn disease.
- Describe Dutch curative foot trimming theory and relate this to lameness aetiology and the anatomy and physiology learned.
- Know when and how to apply blocks.
- Know when and how to apply medical treatments or seek specialist/veterinary attention.

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STUDENT DIARY

Alice McLeish, Edinburgh

Third year student, Edinburgh University



A long way up

From an outside point of view though, I am probably not the most obvious candidate for veterinary medicine, especially the farm side. I was brought up in inner-city Edinburgh, in a family with no vets or farmers. I'd begged my way into a few weeks here and there of helping out on farms or surgeries, but, as I realised when I arrived at university, I was more than slightly out of my depth!

Most vet students who want to work with livestock seem to have come from a farming background. However, lack of experience is no excuse at the vet school, or in practice, so I had to quickly try to catch up, and it was a long way up! Many practical classes later (including memorable ones such as lambing dead lambs out of simulators, and getting thrown half way across a barn trying to mouth gag a cow) and we were deemed ready to be let loose on the real world.

An advantage of not coming from a farming background is that I can't just go home for experience; I've had to go out into situations that I don't know, and made the most of this by getting as varied an experience as possible.

Lambing placements have definitely been the highlight of my first few years; one at a 5,000 acre hill farm in Skye, where the main duty was a quad-bike-ride check every few hours; to the opposite, a farm of around 500 cheviots and mules, all lambed indoors, with close to 24 hour supervision, fridges full of medicines and everything possible done to help the lambs. Three weeks there went smoothly enough after the initial worries, and I have never learnt so much in such a short

space of time; although what will always stick in my mind was being asked to lamb a ewe in front of a visiting class of school children. This ewe was not keen to be caught, dragging me round the pen, knocking a massive bottle of lubricant over my head in the process. The children, and farmer, needless to say, found this hilarious.

My vet friends and I have decided that what vet school really teaches us is the ability to laugh at the ridiculous things that happen to us. My 'moments' have included being screamed at down the phone in Gaelic, which I don't speak, trying to take milk orders at a dairy in Lewis; chasing an escaped giant rabbit down a main road in Edinburgh, and being hit in the face by a flying roof panel when trying to evacuate dogs from a kennels during a storm. I wouldn't change it for anything though.

This semester for third years at Edinburgh is a cat and dog course, but I'm planning to see practice with large animal vets in the near future, before our farm animal course starts after the summer! I look forward to telling you more next time.

About me

Twenty-one years ago, I met my first sheep while on holiday on the Isle of Skye. My delighted parents realised they'd finally found something to keep me occupied, as I spent the whole week pressed against the window of our house, baa-ing at all the sheep that went past. Jokingly, they said I must be going to be a vet (I couldn't say 'Mummy' or 'Daddy', my vocabulary consisting entirely of animals and animal noises). Several years on, here I am in my third year studying to be a vet in Edinburgh, the city I grew up in, with the hope of becoming a mixed practice vet once I graduate.



Feeding the one pet lamb in Skye



Doing the rounds on Skye



Pet lamb pen in Edinburgh

STUDENT DIARY

Antonia Matthews, South East London

Second year veterinary student, Royal Veterinary College



Globally goat mad

It is my ambition to become a goat vet; to this end I have spent this academic year with medical students studying Global Health. Global Health is a very broad topic looking at how to improve human health throughout the world by minimising the effect of diseases such as HIV; how to feed people; how to reduce zoonotic diseases and parasitic burdens in a population.

There are more than 860 million goats on the planet depended on for their milk, meat and skin as well as the economic security they offer. The importance of ensuring their health has a phenomenal impact on human life. This week on my Global Health course we had a malnutrition lecture, learning that 780 million people are malnourished even though there is more than enough food to feed the human population. The importance of using modern farm practices and agriculture research was emphasised as a major factor in trying to reduce the damage done to communities due to food shortages. Hence I want to be involved in maximising herd health to increase food production.

The difference in cattle use globally is also an important consideration in the desire to be a 'global livestock vet'. The current debates on how best to reduce transmission of Tuberculosis into cattle from other animal sources contrasts with my first year essay on the Masaai. The Masaai are nomads in Kenya and Tanzania. Traditionally, the Masaai lived on a diet of raw meat, unpasteurised milk and cattle blood, which meant that members of the Masaai would catch Tuberculosis from their own cattle! Blood drinking practices (which do little for the cattle's health) are disappearing due to a move away from cattle towards producing crops. And good news for those of us wanting to focus on goats, as their cattle population decreases their goat population increases.

My small goat herd reminds me regularly quite how different they are behaviourally to sheep and how no fence is escape proof (I have now invested a painful sum of money in Heras fencing). A recent lecture from David Harwood MRCVS, Honorary Veterinary Surgeon to the British Goat Society, at the RVC acted as a good reminder to vaccinate the goats with Lambivac™ boosters as regularly as possible, his suggestion of up



Getting the chance to practise leg splinting on one of my goats

to every three months did come as a bit of a surprise! Having just turned my goats out I was surprised to learn that most goat producers keep their goats indoors permanently as goats, unlike sheep, don't develop resistance with age to parasites, and that the amount of wormer used should also be double that used in sheep. Hopefully my return to vet school proper in six months will hold fewer surprises.

About me

I am a veterinary student in between my second and third years at the Royal Veterinary College, I am currently finishing a year out to do a degree in Global Health at King's College London. I grew up mostly in South East London spending every moment I could further south east in Kent, working on farms and stable yards. Having escaped living in London I now enjoy the fresh air of Hertfordshire with the husband, dogs, cats, small furies, reptiles, horses and my own small herd of dairy goats.

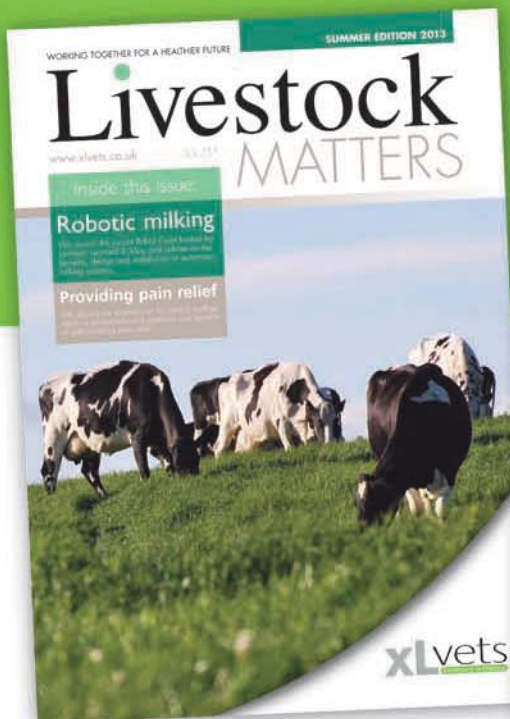


Example of behavioural differences between goats and sheep; my goats wanting to meet my then three month old Irish Wolfhound



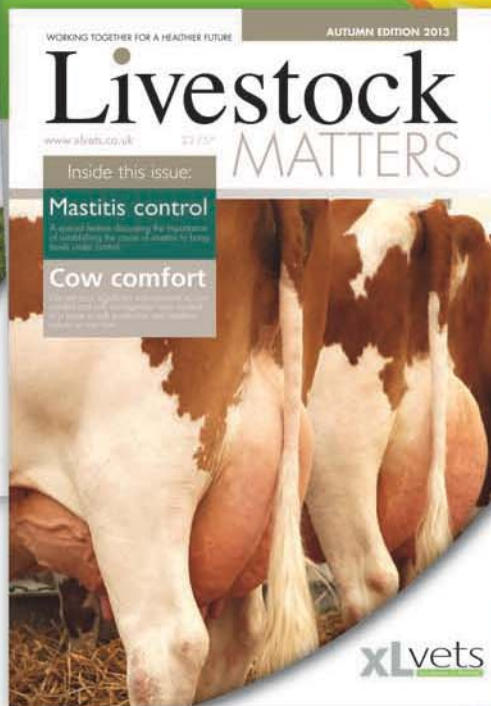
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