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SUMMER EDITION 2015

Livestock MATTERS

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Calf scour

Identifying the causes of scour, treatment options and prevention strategies.

Sheep lameness

The new 'Five Point Plan' for sheep lameness.

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THE EDITOR

Welcome to the 'Summer' issue of Livestock Matters

In this issue we take a look at how one XLVets practice, Friars Moor, is working closely with their beef farmers to help improve herd performance. By benchmarking performance data and holding regular review meetings, farmers are learning from each other, in order for them to make changes that generate real improvements for their herd.

We go back-to-basics with calf scour – considering the many causes, the importance of diagnosing the causal agent and discuss some simple changes that can be made, to ensure calves stay healthy year-round.

We also review the latest thinking regarding tackling sheep lameness; Westmorland and Calweton Veterinary Groups talk us through the current recommendations and we see on two farms how lameness has improved as a result of following this advice. XLVets practices will be launching their own 'Stand up to Sheep Lameness' activities in the coming months – do ask your XLVets practice what's happening in your local area and find out how you can get involved.

Finally we hear about the experiences of two XLVets members who recently spent time working in New Zealand, and learn how this is benefiting their farmers on their return to the UK. We also find out the latest news and views from our more recently qualified vets in 'Graduate Diaries'.

Joanne

We hope you enjoy this issue of Livestock Matters.

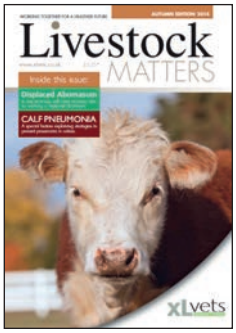
CONTENTS

Livestock Matters article scoops national award

In Livestock Matters, we aim to provide you with informative and practical articles that can help you improve animal health and performance on your farm. So we were delighted to learn that one of last year's articles and its writer Rachel Queenborough have just won a national award – the NOAH Writer/Broadcaster of the Year 2014.

The winning article was 'Strategies to prevent pneumonia in calves' which was published in the Autumn 2014 issue of Livestock Matters. It featured vets Colin Lindsay of Capontree Vet Practice and Vikki Wyse of Prostock Vets and two of their clients who had taken different approaches to preventing pneumonia. The article was recognised as a well-researched piece of technical writing; the panel of three judges also felt that it offered useful, practical advice on the responsible use of medicines, while highlighting the practical challenges that farmers face when rearing calves.

The National Office of Animal Health (NOAH) represents the UK animal medicines industry. Its aim is to promote the benefits of safe, effective, quality medicines for the health and welfare of all animals. Each year, through the British Guild of Agricultural Journalists (BGAJ), the NOAH award is presented to the writer or broadcaster who submits a news story, or feature, which best highlights critical aspects of animal health, welfare and management, or examines topical and relevant issues on any aspect of farm animal care.



If you can't find your copy of Livestock Matters, then you can read the article again on our website, www.xlvets.co.uk/farm/livestock-matters.

Rachel Queenborough (L) Winner of the NOAH BGAJ Award and Cat Sayer NOAH Chairman

XLVets practices working together

Borderway Dairy Expo

The Borderway Dairy Expo at Carlisle Auction has become a leading dairy event in the UK and rates itself amongst the top dairy cattle shows in Europe. This year five regional XLVets practices, Paragon Veterinary Group, Capontree Veterinary Centre, Millcroft Veterinary Group, Kingsway Veterinary Group and Westmorland Veterinary Group joined together to share a stand as well as sponsoring two classes, Red and White Maiden Heifer and Dairy Shorthorn Senior Cow.

Many practice staff attended the event and welcomed visitors onto the stand for refreshments and to learn more about activities within their local area. Rod Welford from Millcroft Veterinary Group organised a great 'FarmSkills' interactive competition to find the fastest blindfolded individual to place a halter on a model cow, 20 seconds was the record!

Look out for the practices when they return to Agri Expo on 31st October 2015.

Dairy Shorthorn Senior Cow presented by Kevin Beattie, Capontree Veterinary Centre

Beef Expo 2015

Make your farm your FORTRESS

BVD CHECK TAG

Returning to the North of England for a second year running after a busy show at Hexham 2014, Beef Expo arrived at York Auction Centre on 21st May for a busy day of everything beef!

As ever our enthusiastic team and a group of willing volunteers from XLVet practices made their way across to host a very busy stand giving visitors information on upcoming FarmSkills workshops as well as our recent campaigns and initiatives including the *Make Your Farm Your Fortress* and *BVD CHECK TAG* initiatives which have had a successful year reinforcing the importance of on-farm biosecurity and using the check tag system to ensure calves are tested for BVD ahead of purchase.

This year, the FarmSkills team were invited by the National Beef Association to get involved with a new competition for 'up and coming' beef farmers attending this year's event.

The Future Beef Farmer Challenge, a collaboration between FarmSkills, EBLEX, Thompsons Feeds and the Charolais Society, saw both teams and individuals take on a variety of different challenges covering selection, health and welfare, genetics and nutrition throughout the day.

While good-natured and enthusiastic, there was a tense competitive atmosphere on the XLVets stand which was hosting the 'Health and Welfare' section of the challenge. Teams from local Young Farmers clubs and agricultural colleges, as well as individual farmers, competed for the title and the chance of winning a trophy and goody bag which included vouchers to attend FarmSkills training workshops.

Adding a touch of celebrity glamour to proceedings the results were announced and the winning team, an all-female group from the local agricultural college Askham Bryan, awarded their prizes in the main ring at the end of the day by Adam Henson of CountryFile fame!

A fantastic day was had by all on a gloriously sunny day in Yorkshire. A big thank you to everyone who visited the stand and got involved with the challenges we had on offer.

The Future Beef Farmer Challenge winning team from Askham Bryan College collect their award from Adam Henson

The XLVets stand was busy with competitors for the Future Beef Farmer Challenge

Assessing semen quality takes a leap forward thanks to two XLVets practices

RAFT Solutions Ltd
research | advanced breeding | food futures | training

XLVet member practices Bishopton Veterinary Group and Synergy Farm Health channel their research, development and training through their jointly owned company, RAFT Solutions Ltd. They have recently completed a research trial evaluating and developing a new way of assessing semen quality using an accurate and objective method. This cutting edge system uses computer assisted semen analysis (CASA) combined with flow cytometry.

After several years of research led by Mark Spilman and international collaboration, RAFT Solutions are able to develop their research into a new commercial service for UK cattle farmers, called 'SemenRate'. Similar systems are being established from Canada to Taiwan and RAFT Solutions are working closely with French and Dutch partners in taking the concept forward. Combining ease of use with cutting edge technology, 'Semen Rate' is a service that works alongside your veterinary practice input to focus on genuine improvement in conception rate in your herd.

We'll be taking a closer look at how this technology can benefit commercial herds in the next issue of Livestock Matters. In the meantime, if you want to know more about the service then contact your XLVets practice.

Beef farmers (as well as dairy farmers) benefit from Discussion Groups

LUCY GILL, FRIARS MOOR VETERINARY CLINIC

Many dairy farmers attend milk buyer meetings, get involved in farm discussion groups, and see their vet and nutritionist routinely. So when problems arise, or they want to evaluate herd performance, there's someone to talk to, and data to compare. For beef farmers, there are fewer opportunities to do this. However, discussion groups specifically for beef farmers are now being run by some XLVets practices, so they too can enjoy the many benefits.

Veterinary surgeon	Lucy Gill
XLVets practice	Friars Moor Veterinary Clinic

A beef discussion group was set up two years ago by vets Lucy Gill and Helen Rogers from Friars Moor Veterinary Clinic. Their main aim was to help improve production on their clients' suckler units by creating a group which met regularly to discuss topics and compare performance figures. It has also helped some farmers feel less isolated.

Lucy explains: 'We held an open meeting inviting farmers to join and ten signed up. Each farm then received an annual health review with either Helen or myself, to prioritise areas that could be improved, set targets, and work out strategies to achieve them.

'On some farms this has involved veterinary work such as semen-testing of bulls and pregnancy testing. On others, we have advised on herd management issues; whether an additional stock bull is needed, or weighing heifers to check service weights.'

All farms have to sign up to the SAC on-line health planning programme which collates data on fertility and health. 'This tool allows us to compare herd production between years on the same unit, and makes it easy to compare farms within the group,' explains Lucy.

'We don't ask farmers to collect lots of data, just some key statistics. These can either be uploaded by the members themselves, or sent to the practice and we do it for them.

There's an annual membership fee of £100 to be in the group. And we get sponsorship to support the different meetings from commercial companies. One of them is a feed business and their nutritionist is also a member, bringing an extra dimension to discussions. We started with ten farms, and another five joined in the second year.'

The group meets quarterly. Each time, Helen and Lucy anonymously benchmark farm performance. Lucy adds: 'It's the sharing of the data that is the key. It's very motivating for those wanting to tighten up their production, to see how well other farms can do. There's some healthy competition in the group!'

Membership benefits

Amongst the first members to join were Will Coward, and his father David, from Manor Farm, Mere, near Frome.

Here they run a spring-calving pedigree Aberdeen Angus herd of around 130 cows and heifers, which are extensively grazed on the local chalk downs. They also have an arable enterprise which provides straw and barley feed for the herd.

Calves are weaned in the autumn, fed a TMR ration indoors, and sold as stores the following spring. Fertility is good, with only a 2% barren incidence, and in 2014, calves were sold from 88% of animals put to the bull.

Will enjoys the quarterly meetings: 'It's really good to be able to speak to fellow beef farmers. Sometimes we are having problems and it's easy to get downhearted. But then we go to a meeting and discover that we are not alone, and sometimes it's just the season or a particular disease that's causing the issue.'

Will Coward, Manor Farm, Mere, near Frome

The benchmarking across the group is also of great interest. Will says: 'We can see the performance of all the others, and compare that with our own figures. It helps us realise what can be achieved.

'Previously, we had targets for growth of the stores, but no targets for the cows. We found late calvers frustrating, but at least we knew we had a calf to sell. We didn't assess what they were costing us. But with more information, we can see what needs to improve.'

A tighter calving period

At Manor Farm, late calvers were a consequence of an extended service period.

Will explains: 'Because we always get very busy with the harvest, it's been easier to leave the bulls in with the cows. In 2013, the bulls were left for 26 weeks – which of course led to a long-drawn-out calving period.

'But now we are making a conscious effort to meet the target of a 12-week service period. In 2014, we managed to shorten it to 14 weeks – an early harvest coincided with when we needed to take them out!'

Will Coward's target is to put the bulls in with the cows for no more than 12 weeks

The calving target is for 65% of all cows and heifers to calve in the first three weeks. In 2014 39% of animals had calved in this time. This year, the figure has risen to 58%.

The last few cows to calve; this year 58% of cows calved within the first 3 weeks of the calving block

Will has seen the benefits: 'We sell calves as stores at 12 months. By having more calves born in a shorter time period, they are a similar size, and we can sell 40 steers to our buyer in one go.

'Having them born earlier also means we can send them off sooner, and this relieves pressure in the shed, as we need the space for calving cows.'

Lucy points out: 'Earlier born calves will have more time to gain growth from grass and milk, saving on feed costs.

'And heifer replacements which are born earlier in the year should have grown well enough to calve down at two years of age not three.

'Within the discussion group, some farms are still calving heifers down at three years – but studies have shown that these are more likely to need assistance at calving and be slower to get back in-calf.

'Cows that calve earlier in the block also have more time to recover and will have several cycles more opportunity of getting back in-calf compared with a later calving animal.'

With a tighter calving block, calves are of a similar size and easier to batch sell

Discussion topics

Discussion topics are not always directly health-related. They have included a farm walk with a focus on grassland production, two meetings on nutrition - feeding weaned calves and dry suckler cows, and a 'lively discussion' on beef costings.

Lucy adds: 'At our autumn fertility meeting, we used the group's figures to compare bull:cow ratio, length of calving period, percentage of cows calving in the first three weeks and percentage empty across the farms, for the two years that the group has been running. We discussed the factors that might influence the best and worst figures.'

Earlier this year, a calving clinic was held which included practical advice on delivering calves, and covered subjects such as colostrum, pain relief, and milk fever.

It led to some changes in policy at Manor Farm. Will explains: 'We used to give pain relief only to animals after a hard calving. But now with a greater understanding of the knock-on effects of pain, we use a painkiller for any assisted calvings. After all, if a cow's not comfortable, she is not going to let her milk down, nor want to eat.'

A meeting held in November last year, on a member's farm, provided practical guidance on body condition scoring. 'Body condition score (BCS) is important' says Lucy. 'To minimise calving difficulties, cows should be in body condition 2.5 – 3.0 at calving.

The following week, Will and David took some time out to condition-score their herd. 'We'd only ever done this by eye before,' admits Will. 'But we could now put our hands on and feel the pins and make a better evaluation. We separated out any cows that were below target and fed them silage in addition to barley straw and protein nuts, whilst the cows that were on target were just fed straw and nuts.'

Lucy explains: 'Management of BCS of the herd in the last two months of pregnancy meant most cows were on target at calving, optimising cow vitality, calf birthweights, colostrum quality and calf survival.'

Continuing discussions

Lucy adds: 'This discussion group provides a good platform to build awareness of a wide cross-section of aspects of beef farming, all of which ultimately impact on herd performance.

'If beef farmers are to make money, then they need to manage their herd well and hit their performance targets.'

Will adds: 'Before joining the discussion group, we would only see the vet for TB-testing, or for calving assistance. But now we are not only learning a lot, we can also see how our herd is performing compared with others, and it's really good to be able to talk to other farmers too'.

Discussion topics have included maximising grassland production as well as a practical session on body condition scoring and a calving clinic

No need to 'put up' with lameness, if appropriate control strategy taken

JUDITH LEE, WESTMORLAND VETERINARY GROUP
JOHN HEMINGWAY, ENDELL VETERINARY GROUP

What percentage of your sheep flock are lame at any one time? What is the cause(s)? How are you treating lame cases? Is your strategy working? Or do you believe lameness is just something to 'put up' with?

Veterinary surgeon Judith Lee

XLVets practice Westmorland Veterinary Group

In the national flock, lameness prevalence is estimated to be around 10%. Industry targets have been set to reduce this to less than 5% by 2016.

However, if the causative agents are correctly identified and the appropriate treatment strategies followed, it is quite possible to reduce the level of lameness in a flock down to less than 1%. To this end, XLVets is launching a campaign – 'Stand up to Sheep Lameness' – to help farmers get on top of the problem. It is founded on the principles of the industry's 'Five Point Plan'.

'Five Point Plan' to reducing lameness

1. **TREAT** – quickly and correctly
2. **AVOID** – segregate lame sheep, avoid gathering more than necessary
3. **CULL** – remove breeding animals which succumb easily to infections
4. **QUARANTINE** – check feet on arrival and spray all feet with antibiotic/foot-bath them
5. **VACCINATE** – the footrot vaccine is a useful tool; discuss the protocol with your vet

Historically, the main strategies employed to tackle lameness have been foot-bathing and trimming hooves. But recent studies have shown that this is not the best approach. In this article, Judith Lee of Westmorland Veterinary Practice comments on an EBLEX-funded trial on a Cumbrian farm which demonstrates that foot-trimming is not the answer to reducing lameness.

And John Hemingway from Endell Veterinary Group in Salisbury, Wiltshire, and sheep grazier Rob Hawke outline how making investments in foot health is paying off.

Identifying the cause of lameness

What is the cause of lameness in these sheep?

A

B

(answers on page 10)

A faster recovery from lameness

At Spital Farm, near Kendal in Cumbria, Mark and Rachel Dodgson run a flock of 300 Texel breeding ewes, and a beef suckler herd. Their vet practice is Westmorland Veterinary Group.

Mark and Rachel Dodgson

Last year, the Dodgsons had an opportunity to take part in an EBLEX-funded trial looking at methods of reducing lameness in sheep. Since taking part in the trial, they have completely changed their approach.

'Foot health was the one thing I wanted to improve in my sheep flock, as I believed it would make a difference to profitability,' explains Mark. 'It's one of the biggest costs, and we farmers don't always realise it. But lame lambs take longer to finish, and lame ewes will have less body condition and milk.'

Vet Judith Lee from the Westmorland Veterinary Group explains: 'The majority of lameness in flocks is caused by infections, i.e. scald, footrot and CODD – Contagious Ovine Digital Dermatitis. At Spital Farm, scald and footrot are the main problems, and affect both ewes and lambs.'

The Dodgsons had always relied on foot-trimming and foot-bathing in formalin solution to resolve their lameness cases.

Judith adds: 'Foot-bathing has to be used very carefully, as unless the solution is fairly clean, and sheep are allowed to then stand to dry on clean ground, it can actually make the problem worse and spread the infection. Foot-bath solutions that are too concentrated can also damage the skin above the hoof making it easier for CODD bacteria to infect the feet. Farmers should consult their vet as to which solution is best to use on their farm, and at what strength, and time duration.'

Ewe and young lambs on the Dodgson farm

Ewes and lambs by mineral tubs

Foot-trimming trial

On the Dodgsons' farm, the first part of the EBLEX trial involved vaccinating the ewes against footrot, in advance of tupping. Then any lame ewes and lambs were separated from the main flock to make a 'crock flock'. Judith explains: 'Lame sheep will be a source of infection to their flockmates, so it's advisable to keep them away from the main flock.'

For the trial, 28 lambs which were of a similar age, and lame due either to scald or footrot, were separated out. These were all treated with antibiotics – a systemic injection and a topical spray. Half the lambs were then foot-trimmed, while the others received no further treatments.

Four days after the treatments, the group showing the best recovery was the un-trimmed group with 10 of the 14 lambs no longer lame, compared with only five lambs with sound feet in the trimmed group, as shown in *Figure 1*.

Eleven days after the initial treatments, 43% of lambs in the trimmed group needed a second round of antibiotic treatments, but only 21% in the un-trimmed group.

Six weeks later, over 80% of the trimmed group had overgrown or 'flappy' feet, but less than 40% in the un-trimmed group.

The effect of trimming and lameness on performance was also evident. After six weeks, 31% of the un-trimmed group were ready for sale or had been sold already, but just over 20% of the foot-trimmed group were ready.

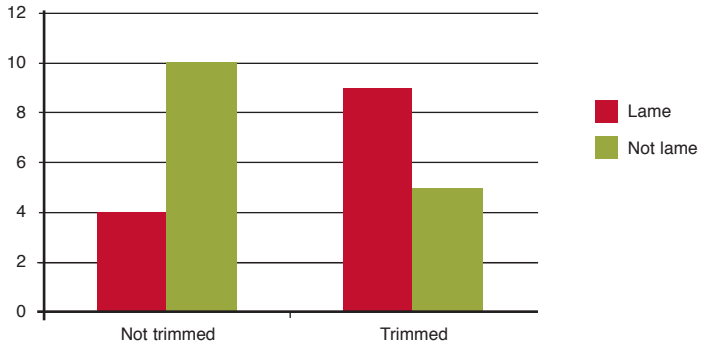
Judith says: 'Trimming not only delayed the return to good foot health but also the return to normal foot appearance. The trimmed group also required more antibiotic treatment.

'Many farmers accept a level of lameness in a flock. But this EBLEX work has highlighted that you don't have to put up with it.

'The Dodgsons need to maintain vigilance as reinfection can occur and create ongoing problems.'

The Dodgsons have still to evaluate the overall benefits but already have seen some improvements. Mark comments: 'We used to get footrot in the ewes when we brought them indoors prior to lambing, but this year we've certainly seen less of that. And I've been pleasantly surprised that we have had a more even size of lamb this spring.'

Figure 1: Number of lame lambs four days post-treatment



Veterinary surgeon	John Hemingway
XLVets practice	Endell Veterinary Group

JOHN HEMINGWAY, ENDELL VETERINARY GROUP

A worthwhile investment of time and treatments

Rob Hawke and his wife Anna run a 1,000-head commercial flock of Romneys, managed conventionally across several blocks of rented land near Wilton in Wiltshire. As graziers, rather than farmers, they do not receive any Single Farm Payment and so the flock needs to be profitable in its own right.

At the same time, Rob is also a full-time contract shepherd for a 600-ewe organic flock of Romneys, owned by Lord Head of Throope Manor. This flock is extensively grazed, rarely gathered up, and has less than 1% lameness.

However, in the Hawkes' flock, lameness prevalence has been running at around the 5% level for the past five years or so.

Rob explains: 'We have never foot-trimmed as a routine. Instead, all lame animals are given an injection of a long-acting antibiotic, plus a topical antibiotic spray.

'We tend to always have a blitz on treating lame sheep when we are gathering them up, for instance at weaning. But of course, this process provides an opportunity for infection to spread.

'And with a lot of temporary grazing, it's hard to catch any lame sheep when they are out, and get them treated within three days. So we've never successfully made any inroads into reducing the level of lameness,' adds Rob.

Motivational factors

Last year, the Hawkes decided it was time to be more proactive and to 'nail' the foot issue. Rob sees plenty of value in reducing lameness in the flock: 'It will improve overall productivity; better conception rates, improved lamb birth weights and more milky ewes. The latter two points will have a positive impact on weaning weights – and the heavier the lambs are at weaning, the fewer days they will need to be on the farm.

'Another good reason to tackle it is that one of the grazing blocks has a footpath nearby, and so any lame sheep are on show to the public,' adds Rob.

Quarantine routine

Both footrot and CODD are contagious diseases, and so any bought-in sheep should always be quarantined to ensure they are not a source of infection. Rob and Anna's breeding ewe flock is self-contained, so the only bought-in sheep are replacement rams. However, the risks are minimised as these rams are only ever bought off-farm from one of two breeders. On arrival, they are kept separate, wormed and drenched for fluke. They receive two injections for scab, seven days apart. Rob and Anna will also inspect their feet. They are then kept separate from the rest of the flock for at least two weeks.

Rob and Anna Hawke

Romney with ewe and lamb

Rob Hawke and Sheepdog Nan

Investing in health

Last August, after weaning the lambs and sorting out some culls, the whole flock was vaccinated against footrot.

This was the first time the Hawkes had used a vaccine, and it would provide cover for six months, taking the sheep through the winter.

John Hemingway, one of the vets from the Endell Vet Practice that provides advice and support to the Hawkes, explains: 'By using the vaccine, the reinfection pressure has been reduced.'

However, he warns: 'The vaccine is an oil-based product and farmers need to be especially careful to avoid self-injection. The Hawkes benefited from having a mobile yard which included a well-designed crush for restraining sheep.'

The Hawkes' mobile sheep pens and well-designed crush for restraining sheep

Footrot will spread more easily in wet conditions, and the Hawkes have noticed that they see more lameness in the blocks of land which are river meadows, compared with those which are chalk downland.

After vaccinating, the ewes were moved in with the rams on footrot free pastures. Rob says: 'The vaccination had a massive effect – 99.9% of the sheep were sound in foot through the tupping period.

'To be fair, we had made a few other changes around that time, including giving two-thirds of them a pre-tup shear. Yet we did see a 10% increase in our scanning results, and we wonder whether the good foot health was a contributor to that, especially when all our neighbours were getting poorer scanning results than usual that spring.'

But over the winter, new cases of lameness started to appear. At this point, the ewes were being strip-grazed on fodder beet and were tightly stocked. Conditions underfoot were also very muddy.

'We were concerned that we had had a breakdown and that they were cross-infecting each other,' says Rob.

'However, when we brought them in, in early February, we discovered that most of the lame ones had got CODD.'

John adds: 'This infection is a lot more aggressive than footrot, and animals will go lamer quicker. CODD will cause the coronary band to rot. If not treated promptly, damage to the coronary band can result in the hoof not growing back properly. And if left untreated, it can result in the hoof wall dropping off altogether.

'The Hawkes had been treating all cases with an oxytetracycline antibiotic, which is effective against footrot, but ineffective against CODD.'

John recommended that the Hawkes switch to a different antibiotic (tulathromycin) for the CODD cases.

'This is a lot more expensive,' says Rob. 'But at this point we had a smaller number of lame cases. So in fact, we have only used one bottle across the whole flock.'

John and Rob have calculated that the Hawkes spent around £850 on the footrot vaccine which brought lameness down to around 3%. Then the change of antibiotic added roughly another £150 to the bill. This has now brought the incidence down to the target of around 1%.

Rob says: 'I think it is money well spent. It equates to £1 per sheep. Plus we are spending less time treating lame sheep, using less antibiotic, and already – from just the scanning results – we think we've seen some performance benefit too.

'We haven't seen lame numbers rise since then, although we do notice that we get the odd spike after handling.'

So to help limit the spread of any disease, Rob is going to be spreading lime as a disinfectant onto the yards before bringing the sheep in.

John says: 'The Hawkes have been successful in reducing the reservoir of infection in the flock. I wouldn't expect them to need to vaccinate again for the foreseeable future, so if lameness cases did start to rise, then this might indicate that there were other issues which needed addressing.'

John Hemingway and Rob Hawke

Stand up to Sheep Lameness

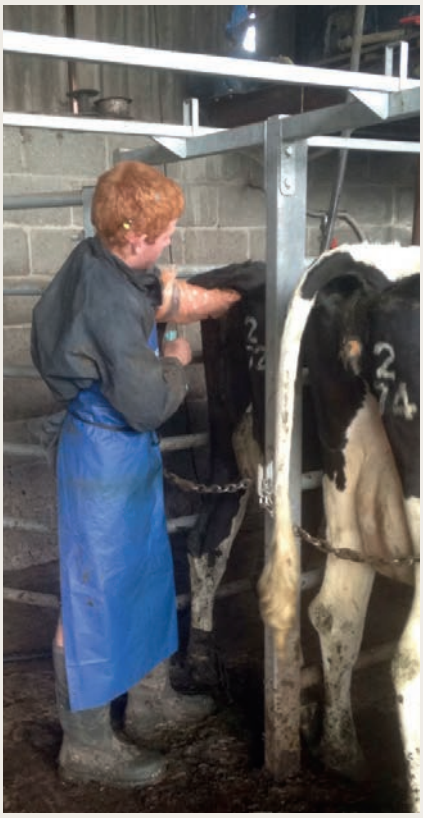
This summer, XLVets is launching an initiative to help sheep farmers tackle lameness in their flocks. Over the coming months XLVets practices will be holding a series of events and running FarmSkills sheep lameness courses and attending key livestock events to promote the 'Stand up to Sheep Lameness' initiative. There will be a range of informative literature on identifying the different causes of lameness, and the best treatment programmes to follow for farmers.

For more information on 'Stand up for Sheep Lameness' contact your XLVets practice.

Answers to identifying the cause of lameness
A = Footrot
B = CODD and footrot

FarmSkills
GROWING FARM BUSINESS SUCCESS

Getting to grips with DIY AI on farm



Our DEFRA approved DIY AI workshops remain by far our most popular FarmSkills course with training taking place on a regular basis across all areas of the country giving you the opportunity to get on top of fertility and conception rates on farm.

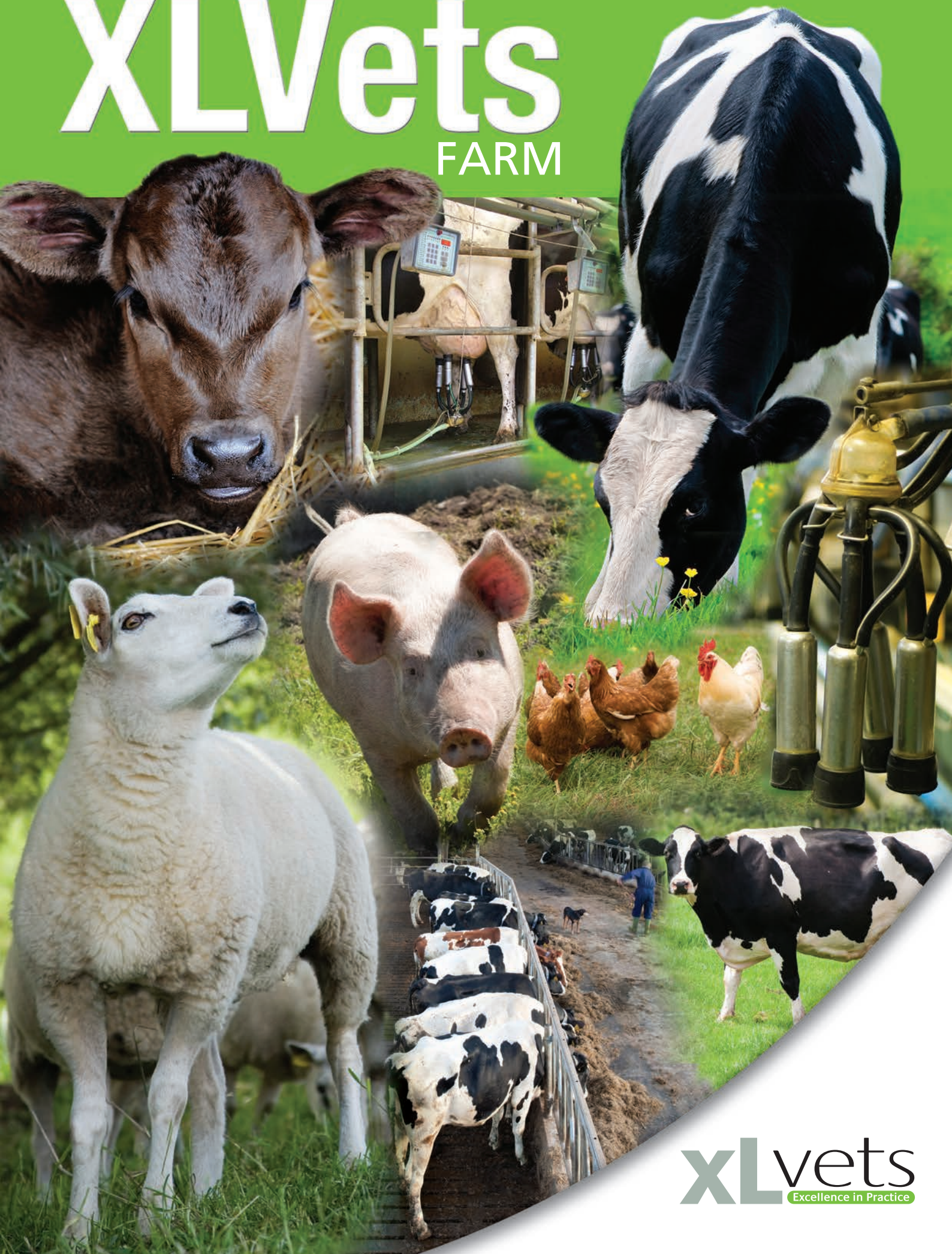
Delivered by our experienced, Lantra approved vets, our Defra approved course is run across four days which includes a day of classroom based theory and techniques, followed by three full days on farm practising the technique on different cows under close supervision.

Along with our supporting DIY AI and fertility workbooks which each delegate receives as a useful reference guide, our course provides enough one-to-one and hands-on experience so that delegates have the time and correct training to get to grips with what can be a technically challenging task.

WORKING TOGETHER FOR A HEALTHIER FUTURE

XLVets

FARM



xLvets
Excellence in Practice

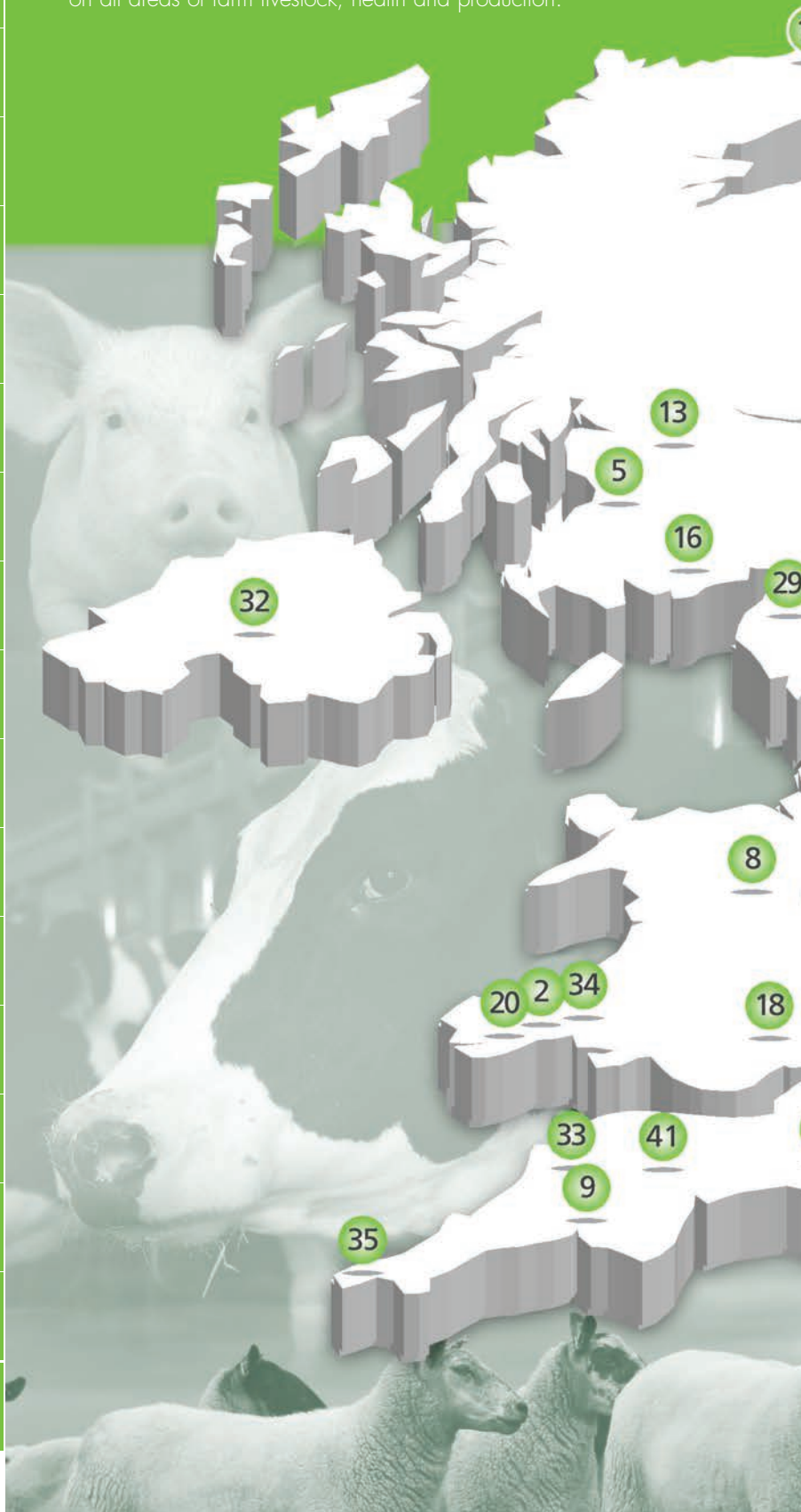
EXCELLENCE IN PRACTICE

XLVets - We E

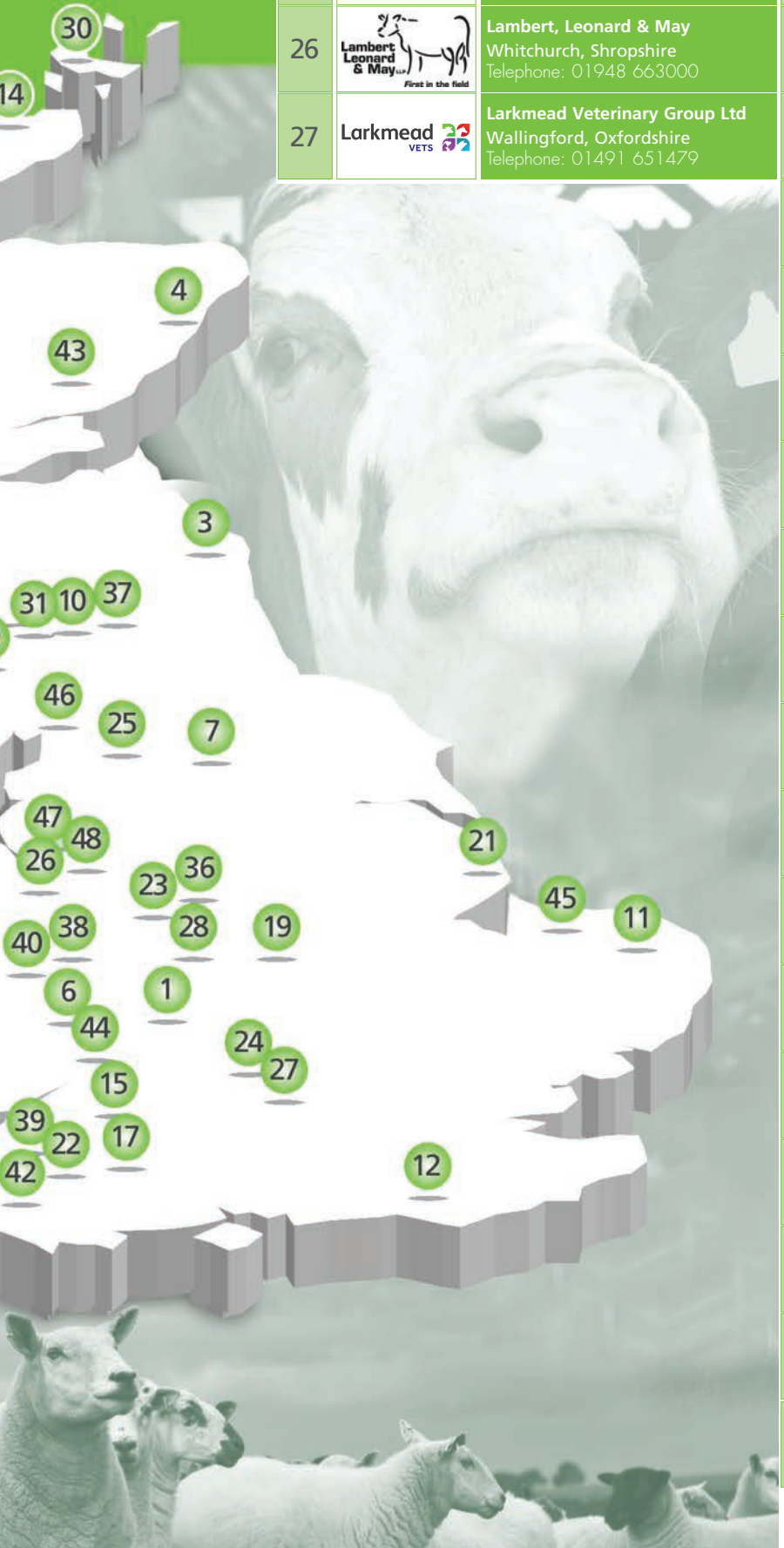
The members of XLVets have worked hard to create what they see as a model of how practices can work together, sharing the latest ideas and passing on savings and joint expertise to clients.

The group comprises a number of the foremost farm practices in the UK. With many years of combined experience, it is able to give expert advice on all areas of farm livestock, health and production.

1	608	**608 Farm and Equine Veterinary Surgeons**, Rowington, Warwickshire Telephone: 01564 783404
2	ALLEN & PARTNERS Veterinary Surgeons	**Allen and Partners** Whitland, Carmarthenshire Telephone: 01994 240318
3	alnorthumbria veterinary group	**Alnorthumbria Veterinary Group** Alnwick, Northumberland Telephone: 01665 510999
4	ARDENE HOUSE VET PRACTICE LTD	**Ardene House Vet Practice Ltd** Aberdeen, Grampian Telephone: 01224 740700
5	Armour veterinary group	**Armour Veterinary Group Ltd** Mauchline, Ayrshire Telephone: 01290 550200
6	BELMONT FARM & EQUINE VETS	**Belmont Farm and Equine Vets Ltd** Hereford, Herefordshire Telephone: 01432 351471
7	BISHOPTON VETERINARY GROUP	**Bishopton Veterinary Group** Ripon, North Yorkshire Telephone: 01765 602396
8	CAIN VETERINARY CENTRE	**Cain Veterinary Centre** Llansantffraid, Powys Telephone: 01691 828205
9	CALWETON VETERINARY GROUP	**Calweton Veterinary Group** Callington, Cornwall Telephone: 01579 383231
10	Capontree	**Capontree Veterinary Centre** Brampton, Cumbria Telephone: 016977 2318
11	Chapelfield VETERINARY PARTNERSHIP	**Chapelfield Veterinary Partnership** Norwich, Norfolk Telephone: 01508 530686
12	CLIFFE VETERINARY GROUP	**Cliffe Veterinary Group Ltd** Lewes, East Sussex Telephone: 01273 473232
13	clydevetgroup	**Clyde Vets Ltd** Lanark, Lanarkshire Telephone: 01555 660000
14		**Donald S McGregor and Partners Ltd** Thurso, Caithness Telephone: 01847 892387
15	DROVE VETERINARY HOSPITAL	**Drove Veterinary Hospital** Swindon, Wiltshire Telephone: 01793 522483
16	Dunmuir VETERINARY GROUP	**Dunmuir Veterinary Group** Castle Douglas, Telephone: 01556 502400
17	EVG	**Endell Veterinary Group Ltd** Salisbury, Wiltshire Telephone: 01722 333291
18	FARM FIRST VETS	**Farm First Veterinary Services** Abergavenny, Gwent Telephone: 01873 840167
19	Farm Veterinary Solutions	**Farm Veterinary Solutions** Uppingham, Rutland Telephone: 01572 822399
20	Fenton Vets Farm Animal	**Fenton Veterinary Practice Ltd** Haverfordwest, Pembrokeshire Telephone: 01437 762806
21		**Fenwold Veterinary Practice** Spilsby, Lincolnshire Telephone: 01790 752227



Excel



22	FRIARS MOOR VETERINARY CLINIC	**Friars Moor Veterinary Clinic Ltd** Sturminster Newton, Dorset Telephone: 01258 472314
23	THE GLENTHORNE VETERINARY GROUP	**Glenthorne Vets Ltd** Uttoxeter, Staffordshire Telephone: 01889 562164
24	HOOK NORTON VETERINARY GROUP	**Hook Norton Veterinary Group** Banbury, Oxfordshire Telephone: 01608 730085
25	KINGSWAY Veterinary Group	**Kingsway Veterinary Group** Skipton, North Yorkshire Telephone: 01756 700940
26	Lambert Leonard & May LLP First in the field	**Lambert, Leonard & May** Whitchurch, Shropshire Telephone: 01948 663000
27	Larkmead VETS	**Larkmead Veterinary Group Ltd** Wallingford, Oxfordshire Telephone: 01491 651479
28	MIDSHIRE FARM & EQUINE	**Midshire Veterinary Group Ltd** Nuneaton, Warwickshire Telephone: 02476 384064
29	MILLCROFT VETERINARY GROUP	**Millcroft Veterinary Group** Cockermouth, Cumbria Telephone: 01900 826666
30	NORTHVET VETERINARY GROUP	**Northvet Veterinary Group Ltd** Kirkwall, Orkney Telephone: 01856 873403
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33	Penbode	**Penbode Vets Ltd** Holsworthy, Devon Telephone: 01409 253418
34		**ProStock Vets Ltd** Nantyci, Carmarthen Telephone: 01267 233266
35	Rosevean VETERINARY PRACTICE	**Rosevean Veterinary Practice Ltd** Penzance, Cornwall Telephone: 01736 362215
36	ScarsdaleVets	**Scarsdale Veterinary Group** Derby, Derbyshire Telephone: 01332 294929
37	Scott Mitchell & Associates VETERINARY SURGEONS	**Scott Mitchell Associates** Hexham, Northumberland Telephone: 01434 608999
38	Severn Edge VETERINARY GROUP FARM	**Severn Edge Veterinary Group** Bridgnorth, Shropshire Telephone: 01746 763998
39	SHEPTON VETS FARM	**Shepton Veterinary Group** Shepton Mallet, Somerset Telephone: 01749 341761
40	SHROPSHIRE FARM VETS	**Shropshire Farm Vets Ltd** Shrewsbury, Shropshire Telephone: 01743 860920
41	St Boniface Farm Vets	**St Boniface Veterinary Clinic** Crediton, Exeter Telephone: 01363 772860
42	synergy FARM HEALTH	**Synergy Farm Health Ltd** Evershot, Dorset Telephone: 01935 83682
43	THRUMS VETERINARY GROUP	**Thrums Veterinary Group** Kirriemuir, Angus Telephone: 01575 572643
44	TYNDALE Farm Veterinary Practice	**Tyndale Vets Ltd** Dursley, Gloucester Telephone: 01453 511311
45	VETERINARY WENSUM VALLEY SURGEONS	**Wensum Valley Veterinary Surgeons** Fakenham, Norfolk Telephone: 01328 864444
46	Westmorland Veterinary Group FARM SERVICES	**Westmorland Veterinary Group** Kendal, Cumbria Telephone: 01539 722692
47	WILLOWS FARM ANIMAL VETERINARY PRACTICE	**Willows Veterinary Group** Northwich, Cheshire Telephone: 01606 723200
48	wvm wright & morten Veterinary Surgeons	**Wright & Morten** Macclesfield, Cheshire Telephone: 0845 8330034

The future of agriculture needs a healthy industry, which needs healthy animals.

XLVets is a group of independently owned, progressive veterinary practices that are committed to the future of the UK livestock industry. Spanning the length and breadth of the UK, we work together, sharing experience, knowledge and skills in order to define and deliver the highest standards of veterinary practice, animal health and productivity.

We strive to be at the heart of our farm clients' business as the primary source of highly valued on-farm advice and the central co-ordinating consultant for other farm services.

Founded in 2005, XLVets originated from a group of dynamic farm animal veterinary practices, who worked hard to create what they saw as a model of how individual practices can work successfully in partnership. Following a period of rapid growth, XLVets is now becoming recognised nationally as a 'quality mark' for veterinary care; not only for livestock, but also in the fields of small animal and equine care.

The group endeavours to source and supply the highest quality, best priced medicines, equipment, products and accessories.

In addition, XLVets works alongside academic bodies and commercial research and manufacturing companies; forging strong industry partnerships to place its member practices at the forefront of veterinary science.

For farm clients of XLVets member practices this gives local access to many of the unique national initiatives the group develops; from health management, consultancy advice and disease prevention, through to bespoke analytical services to improve farm productivity and financial returns.

XLVets member practices are dedicated to providing a high quality, cost effective service to their clients, to support long-term growth and future prosperity within the UK livestock industry.

For further information on XLVets and its member practices please contact the XLVets office.

Telephone: **(01228) 711788**
Email: **admin@xlvets.co.uk**

www.xlvets.co.uk

xLvets
Excellence in Practice

Advantages of AI:

- Use and analysis of bulls across different herds allows access to a wide choice of genetics with high levels of predictability and reliability.
- Semen used in AI is disease free and techniques avoid cow to cow disease spread.
- Cost-savings compared with bull purchase and maintenance.
- Fertility performance can be the equivalent of natural service and the dangers of keeping bulls are eliminated.
- Insemination can be carried out flexibly at the optimum time.
- Cows need not be left waiting for insemination in conditions of isolation or social and nutritional stress.
- Potentially improved biosecurity through fewer visitors to the farm.
- Reduced risk of 'partial thaw' through shared technician field flask storage.

What our workshop covers:

By the end of the FarmSkills DIY AI workshop, trainees will be able to:

- Know the legislation governing AI in the United Kingdom.
- Describe the structure and function of a semen storage flask.
- Carry out safe handling and maintenance of a semen storage flask.
- Practise safe and correct semen handling technique.
- Learn the two stage theory of AI technique.
- Identify key anatomical features outlined in Fertility Module 1 on a specimen or model.
- Prepare and load a 25cc AI gun.
- Using correct technique, pass the AI gun through the cervix of the specimen or model and relate this to the AI theory.
- Accurately identify anatomical landmarks relevant to AI by manual palpation.
- Gain practical experience of the techniques covered in AI theory.
- Achieve a level of competence with AI technique DEFRA certified by the instructor.

What our delegates say:

'The DIY AI workshop I attended was great. I learnt a lot and there was good balance between practical and theory so you really got to grips with the subject before being sent out on farm.'

Richard, Yorkshire

'The workshop I attended has been incredibly beneficial to my business from both a time and cost perspective. I can now AI a cow myself meaning that I don't have to pay a technician to come on farm and do the job. The workshop was very thorough and allowed plenty of time out on farm practising the techniques with an experienced vet on hand to answer my questions.'

Sally, Cheshire

What next?

FarmSkills workshops are practical, hands-on and led by vets and industry experts. We run DIY AI workshops across the country throughout the year so if you are looking to attend a course quickly, we can find a suitable workshop to fit in with you.

Our DIY AI workshop is part of our new FarmSkills Dairy Herdsman Certificate, a programme of dairy practical workshops covering everything from calving and rearing to nutrition and foot-trimming and much more in between. Workshops can be studied individually or as part of a programme to form a certificate of competence and skills.

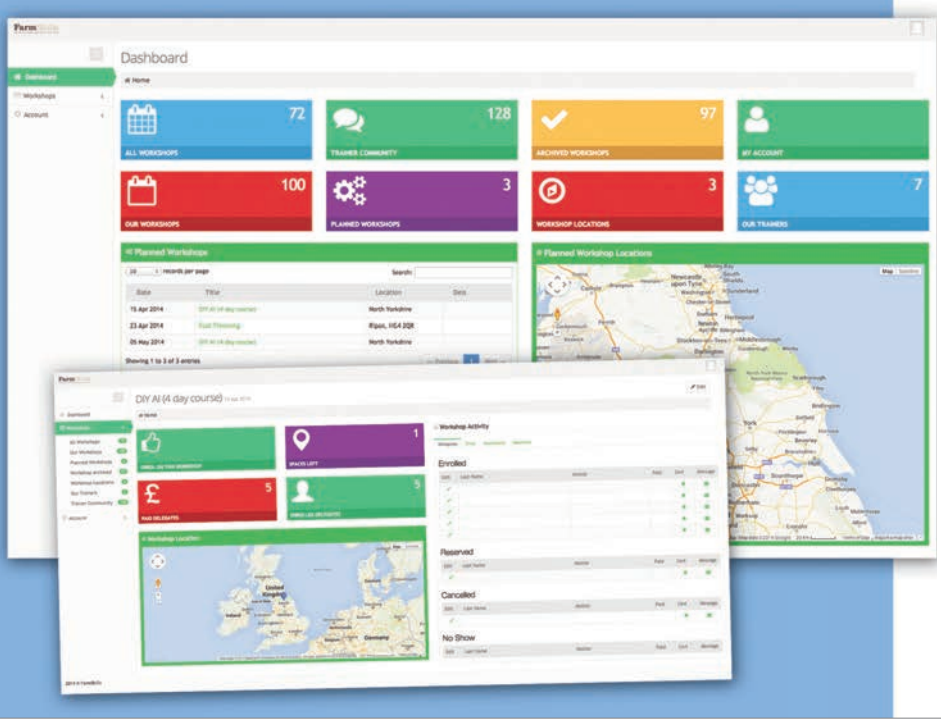
For more information on our workshop visit our website www.farmskills.co.uk to search for courses in your area or contact the team on 01765 608489 or by e-mail; training@xlvets.co.uk.

FarmSkills Farmer Portal - log on today!

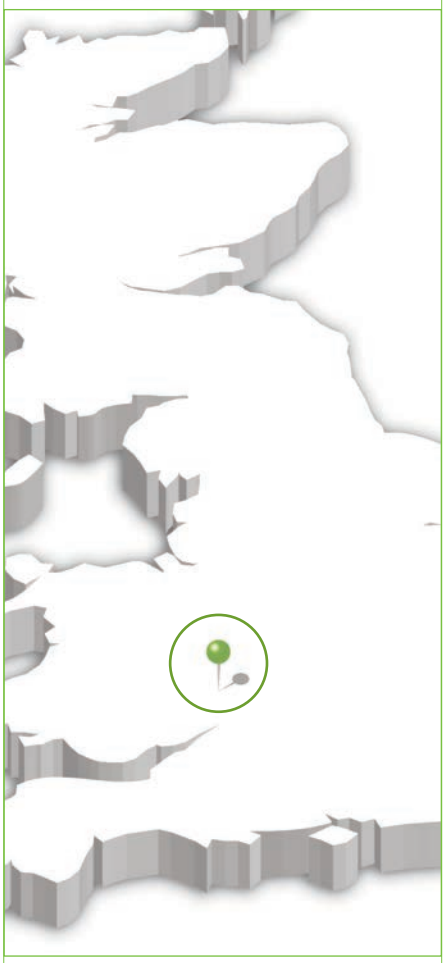
The FarmSkills Farmer Portal is an innovative and interactive online tool allowing farmers to log their FarmSkills training and development. It is now fully up and running and enables farmers to download their certificates and view recommended workshops taking place in their area.

As well as acting as a useful online training tool, the Portal will link in with wider national XLVets campaigns, including the Make Your Farm Your Fortress and BVD initiatives, giving farmers further information on what the issues are and how they can get involved on a local and national level.

Accessing the Farmer Portal is easy, simply go to **www.farmskills.co.uk/portal** to log in and start using today. If you have previously attended some FarmSkills training your record and certificate library will be ready and waiting for you and if you haven't, the system will recommend workshops close to you to get you started.



BELMONT
FARM & EQUINE VETS



Veterinary surgeon	Nick Gibbon
XLVets practice	Belmont Farm and Equine Vets Ltd

Calf scour – diagnosis, treatment, and prevention

NICK GIBBON, BELMONT FARM AND EQUINE VETS LTD
SARAH CALDWELL, CALWETON VETERINARY GROUP

The commonest cause of death in calves, less than a month old, is scour. Whilst treatments centre on re-hydrating calves, and administering appropriate medicines – identifying the cause(s) and making changes to combat them, will not only benefit calf health and performance, but save time and money in the long run.

However, getting to the root of the problem is not always straightforward; there are several causes of scours, including viruses, bacteria and protozoal infections. The impact of all of these can be exacerbated by poor hygiene, poor calf immunity (lack of colostrum) and general calf management. So often scours arise due to a combination of these factors, and similarly several changes may be needed to resolve the scours issue.

Getting veterinary advice is the first step to tracking down culprit pathogens and checking management protocols, so that calf health (and growth and performance), can get back on track.

Causes of calf scour

- Bacteria - *E.coli*, Salmonella
- Viruses – Rotavirus, Coronavirus
- Protozoa – Cryptosporidia, coccidia
- Poor nutrition/management/ environment

Detective work reveals reasons for scours

At Woofields Farm near Ledbury in Herefordshire, a combination of factors was found to be predisposing calves to scours. So a number of changes have been made, and more plans are afoot.

Max Tasker manages the calf-rearing for Fred and Rose Simcock, working alongside the herd manager James Price. They are supported by vets Matthew Pugh and Nick Gibbon from Belmont Vet Practice, who make regular fertility visits. The 580-cow herd is averaging yields of 10,400 litres/cow, and calves all year round.

Calving protocol

The protocol is one of snatch-calving – not just as a control for the few cows identified with Johne's disease, but to ensure that every calf can receive sufficient colostrum in the critical first hours of life to develop good immunity.

New-born calves are taken from the calving pen and put into individual hutches out-doors. These hutches are spaced well apart on a concrete floor and they are steam-cleaned and left empty to dry before calves are moved in.

Cows are milked as soon as possible after calving and colostrum quality is checked with a colostrometer. The calf is fed four litres as soon as possible, usually by bottle, but stomach-tubed if necessary. A second feed of at least two litres is given within the first 24 hours to bring the total colostrum ration up to at least six litres.

Max Tasker

Calves remain in single hutches for at least a week until Max is confident they are drinking and sucking strongly on the teats. They are then moved to a communal igloo pen in a new purpose-built calf shed, and fed by automatic feeder. The igloos are designed to hold 15 calves; Max prefers a minimum of 12, so that they generate enough heat inside it and drive their own ventilation.

When the scour cases started, Max realised that they tended to be those calves that had spent longer in the calving pen – those born in the night – that then went on to scour whilst in the individual hutches.

Nick is a fan of the igloos in the new shed: 'They allow calves to choose their environment instead of forcing them to suffer draughty, humid or cold conditions.'

Nick adds: 'We identified the calving pen as a high risk area for disease challenge. Underneath the straw bedding it's just an earth floor – so it can't be washed down, and disease factors can build up.'

The plan is to make a new calving area – this will be undercover, airy, and close to the dry cows and milking parlour. Instead of an earth or concrete floor, cows will calve down onto rubber matting which can be hosed down and disinfected in-between calves. Meantime, efforts are being made to move calves as soon as they are born, into the clean dry hutches.

Clean dry hutches ready for the next calves

Colostrum checks

Another investigation into the factors behind the scour cases was to check that colostrum was being fed appropriately.

Nick explains: 'We took blood samples from seven-day-old calves and screened them for antibody transfer. These tests would demonstrate whether they were receiving the immunity they needed from the colostrum.'

The aspects of colostrum feeding which affect success can be summarised by 4 Q's: quantity, quality, quickly (how soon after birth the calves receive it) and quietly.

'There was a lot of variation in the results,' says Nick. 'Fortunately, there were records kept on the farm which showed when the calves were born and who had fed the colostrum.'

Some of the low readings were traced to calves that were born in the night and not seen until the following morning, and which may not have suckled enough colostrum on their own. However, investigations also revealed that one of the relief workers had been under-feeding colostrum – so instructions were given to correct this error.

At Woofields Farm, the quality of colostrum is checked prior to freezing spare supplies. Nick comments: 'Colostrum needs to be thawed slowly, otherwise the proteins will be destroyed, reducing its quality, and benefit. Farmers should never be tempted to immerse the frozen bag or carton in very hot water.'

'Colostrum quality also varies with the quantity of milk produced. The more 'milky' cows will tend to have poorer quality colostrum.'

The farm had also experienced a shortage of colostrum production in cows at one time due to an imbalance of protein in the dry cow diet. This had been rectified.

Combating crypto

Although the colostrum issues were largely resolved by the end of last year, and calves were no longer staying in the earth floor yard, there was still a grumbling level of scour cases.

The new calf shed

Despite calves being moved into a new purpose-built shed early this year, there was a large outbreak of scour in one of the

New-born calves are moved as soon as possible from the calving pen as it has been identified to pose a disease challenge

group pens. Isolating the sick calves was the priority for Max, who moved them back into the individual hutches. They received oral rehydration therapy twice daily and a crypto drench.

The pens have since been modified with stock boarding so that calves cannot have contact with other pens. Nick took some faecal samples and identified the presence of cryptosporidia. He also suspected *E.coli* was present.

Nick explains: 'The age at which calves show scour is indicative of the agent causing it. For instance, scours in calves less than seven days old suggests *E.coli*, whereas rotavirus and coronavirus tend to cause scours in 10-14 day old calves. Salmonella can occur at any time from 7-10 days depending on the species. Coccidiosis problems arise when calves are older – at around six weeks of age.

'Cryptosporidial oocysts can be found in the environment most of the time, however, if the challenge is enough and immunity inadequate, then disease prevails. It's spread by faecal-oral routes, so hygiene is paramount. Oocysts are difficult to kill and are only destroyed by steam-cleaning and then drying.

'At Woofields Farm, scours were largely a consequence of inadequate hygiene in the calving yard exposing calves to disease challenge very early on, coupled with insufficient colostrum to develop sufficient immunity.

'Preventing scours has hinged on reducing calf exposure to the environmental challenge of crypto, and ensuring all staff appreciate the importance of colostrum. There are still a few cases of scour occurring in the hutches, and the advent of an easily cleanable calving pen should further reduce their incidence,' adds Nick.

CALWETON FARM

Veterinary surgeon	Sarah Caldwell
XLVets practice	Calweton Vet Group

SARAH CALDWELL, CALWETON VETERINARY GROUP

Change in herd management resolves scour problems

At Trethick Farm near Bodmin in Cornwall, the Martin family have succeeded in stopping a big scour problem through a dramatic change in herd management; switching from calving all year round to calving in two three-month blocks.

Jayne Hick

Jayne Hick is the calf rearer for the Martin family; Emma Martin manages the milking herd, farming alongside her brother Richard who manages the fieldwork, and her parents Donna and Tim.

Vets Sarah Caldwell and Stuart Gough of Calweton Vet Practice make routine fertility visits to the 1,000-cow herd where yields average 8,300 litres/cow.

It was during one of these regular visits in November 2013 that Emma asked for help with solving a scour problem. 'We thought we were doing all the right things,' says Emma. 'Jayne was conscientious about feeding the calves, maintaining consistency in the milk fed and management routine. Calf pens were also being steam-cleaned and disinfected and then bedded with sand and lime and straw.'

But over a six month period, 60 calves had died from dehydration and scours. What's more, some of the weakened calves were developing pneumonia.

Sarah explains: 'Identifying the cause of the scour is key. The sick calves were between seven and 16 days old. I took some faecal samples for analysis, and concentrated on rehydrating the sick calves with an oral drench. I then started them on a course of antibiotics. To help reduce their temperatures and any discomfort associated with the scour, I gave them an anti-inflammatory product. The lab tests confirmed the presence of both rotavirus and cryptosporidiosis.'

Sarah adds: 'These days, it's quite common to see these two causative factors occurring together. Cryptosporidium is the main problem as its oocysts, shed from infected calves, accumulate in the environment and reinfect new calves.'

Calf facilities

The Martins' herd was calved all year round and a number of converted sheds were used to house the calves. Due to the constant arrival of new calves, and the numbers involved, there was never the opportunity to thoroughly clean out and rest any of these sheds.

Sarah adds: 'In some of them the stocking density was high, and in some, there was a large age range, so the older calves could pass infections onto the younger, weaker calves.'

Prompt treatment

Sarah explains: 'When scouring starts, the trick is to act quickly before the animal becomes dehydrated. So we did some staff training on what to look out for; calves not coming up to the feed, sunken eyes, faster breathing rate, and a high temperature. It's well worth taking the temperature of suspect cases.

'At Trethick Farm, sick calves required a course of injectable antibiotics to combat the rotavirus, in conjunction with a painkiller or NSAID.' (Non-Steroidal Anti-Inflammatory Drug).

Sarah explains: 'NSAIDs help reduce the temperature so that the animal feels better sooner and will start drinking and feeding again. In fact, any calf with a high temperature will benefit from an anti-inflammatory medicine.

'With the knowledge that crypto was present, calves are also given an oral drench to reduce the shedding of the cryptosporidial oocysts, thereby reducing challenge to their shedmates. During the outbreak in November 2013, it was also given preventatively, as we knew that crypto was present.'

At Trethick Farm, no specific treatments were targeted towards the rotavirus. Sarah explains: 'Drenching and cleaning reduced the challenge from the crypto. We also checked the calves were receiving sufficient colostrum. So calves had the immunity to withstand the rotavirus.'

Communications

At Trethick Farm, calf-rearing is mainly undertaken by Jayne but fellow staff provide cover for her holidays and days off. So Calweton Vets devised a 'Calf Health Protocol' – the full version is kept in the farm office, and the key points have been lifted onto laminated sheets pinned up in the shed, making it easy for everyone involved to follow the guidelines.

Jayne adds: 'The evening before my day off, I'll always have a chat with whoever is covering for me the next day, and brief them on any particular problem calves.'

'Block' calving bonus

The big improvement in calf health was seen when the herd moved to a block calving strategy of three months on and three months off, through the year. This meant there was a clear period of time when no calves were being born and the sheds could be power-washed, disinfected and then left to dry, before being bedded up for the next batch of calves.

Emma explains: 'With such a large herd, and calving all year round, we didn't have time to focus on any one area.

'The block calving was my father's idea, but I wasn't keen to start with, doubting we had the facilities. But now I'm glad we made the change. It's resolved the scour problem and also gives me more time to focus on AI. With two blocks instead of one, it's a good halfway measure. The second block gives cows an extra chance to get in-calf.

'Another benefit from the change is that with more calves of a similar age, it is easier to adhere to calf vaccination protocols.'

Jayne agrees: 'It's made a huge difference and we hardly ever have a scouring calf now. I thought it was going to mean more work – there are sometimes over 400 calves in the sheds! But actually it's easier to keep control of everything.'

These 1-2 week old calves are the last to be born in the current calving block.

Take action against scours

Sarah says: 'It can be tempting, at first, to turn a blind eye to the odd scour case, but when more start to occur, calf-rearers shouldn't let the situation get out of hand. Aside from the detrimental impact on calf health and performance, it can also be very demoralising to be dealing with sick or dying calves.

'The first step is to find out what is causing the scour – this will involve investigations into calf management, colostrum protocols, blood testing for antibodies, and analysis of faecal samples. There may be several factors which add up to creating the problem, so farmers and calf-rearers should not be hesitant in asking their vet for help.'

The 5 C's of good calf rearing

1. Colostrum	To ensure a calf develops good immunity, it should receive at least 4 litres of (good quality) colostrum within the first 4 hours of life, and have at least 6 litres within the first 24 hours.
2. Calories	In colder weather calves require more energy to keep warm. Calf jackets can be used and/or increase the quantity of milk replacer in mixed milk.
3. Cleanliness	Ensure the calf's environment is clean from the calving pen to the group rearing pen to reduce disease challenges. Clean, wash, disinfect and dry housing between calves.
4. Comfort	Avoid draughts, but ensure good ventilation. Ensure clean dry bedding – calves need to lie down!
5. Consistency	For young calves, changes can be stressful. They should have the same quality and temperature of milk and be fed at the same time every day. And if possible, the same person feeding them.

New Zealand sabbaticals bring new ideas back for UK farmers

Bryony Kendall from Tyndale Vet Practice and Jonny Duncan from the Willows Veterinary Group are two XLVets members who wanted to broaden their experiences and veterinary expertise, and went overseas to work as a way of doing so. They have both recently returned from New Zealand where they worked for veterinary practices and their dairy clients. Both have also brought home some new ideas for their UK dairy clients.

TYNDALE
Farm Veterinary Practice

Veterinary surgeon	Bryony Kendall
XLVets practice	Tyndale Vet Practice

Bryony Kendall takes time out for some sight-seeing

Bryony spent seven months working at a veterinary practice near Mount Taranaki, on the west coast of the North Island. Dairy herd sizes here average 220 milking cows.

Typically, New Zealand dairy systems are grass-based, with herds block-calved in the spring to capitalise on making milk from grass. Milk yields average 4,000 litres/cow/year. Some farmers also feed maize silage and palm kernel – a byproduct of the palm oil industry imported from South East Asia, which is a high energy and protein feedstuff. Over the winter, when grass growth slows down, cows' diets are topped up with big bale grass silage.

BRYONY KENDALL, TYNDALE VET PRACTICE

Bryony explains: 'Dairy cows aren't under the same production pressures as UK dairy cows, and there is a big focus on fertility, to maintain the calving blocks.

'There is a higher incidence of lameness, as cows often have a long way to walk to paddocks. Environmental mastitis is, however, less of an issue than in the UK as cows are out at grass in a rotating paddock system rather than set stocked.'

Economics

The milk price for New Zealand farmers has almost halved compared with last year, a consequence of global oversupply. Bryony explains: 'Farmers are paid per kilogramme of milk solids produced, not per litre. While I was there it dropped from the predicted NZ$6 per kg to NZ$4 and then went up to the current NZ$5.30. With yields of 4,000 litres/cow/year, and average milk solids of 8%, that equates to an income of around £850/cow/year. This means farmers have to keep a pretty close eye on feed and medicine costs.'

Seasonality

'With block-calving the norm, the nature of veterinary work changes considerably with the season,' explains Bryony. 'We tended to do one thing furiously for a while, and then move onto something else and then do that to the exclusion of everything else!'

At the start of the 'breeding period', the main job for Bryony and her Kiwi colleagues was to 'metricheck' the cows. This involved inserting a small rubber cup on a stick into a cow's vagina and checking the discharge that was scraped out. Any metritis cases could then be washed out with antibiotic. 'With everything done en masse, unlike the UK, all the medicines came in bulk packs,' says Bryony.

The next job for the vets was to administer CIDRs to synchronise cows that had not been seen bulling after 10 weeks, as identified from tail painting and monitoring. The synchronisation programme is carried out nationally with all vets following the same protocol. 'There's little investment in handling systems, so most CIDRs are administered by standing in the pits of herringbone parlours.' Over a three-day period, Bryony put in 200 CIDRS in this way!

During the calving season, veterinary work was again very focused on one type of activity: Bryony tackled 49 calvings over four weeks. 'In-between calvings, we had some downer cow cases,' says Bryony. 'Because the farming systems are entirely pasture-based, these are difficult to prevent. The main way to prevent milk fever was to dust the pasture with magnesium sulphate daily, either from a quad bike or helicopter depending on the gradient of the land. Limestone flour is fed to the milking cows in the parlour to provide them with calcium.'

Technician services

One of the differences that made a big impression on Bryony was the large amount of work carried out by vet technicians: 'At the Taranaki practice, farmers really made use of their services. For instance, technicians would take portable scales onto farms to weigh heifers so that they could monitor growth rates. Another service was vaccinating animals; by having the technicians come out at prearranged dates, it ensured that herds were kept up-to-date with the necessary injections.

'At Tyndale we already have a technician team, and are considering how to expand its services,' adds Bryony.

Bryony worked on dairy farms in the Mount Taranaki area

Bryony's 'ute' - great for bumping across paddocks to get to downer cows!

WILLOWS FARM ANIMAL VETERINARY PRACTICE

Veterinary surgeon **Jonny Duncan**

XLVets practice **Willows Veterinary Group**

JONNY DUNCAN, WILLOWS VETERINARY GROUP

Jonny Duncan from the Willows Veterinary Group in Cheshire was away six months, working first as a locum on the South Island at Ashburton, Canterbury where herd size averaged nearly 1,000 cows, and then in the Waikato region of the North Island where herd numbers averaged 350 cows.

Batch disbudding

Jonny was 'highly impressed' with the approach taken to disbudding calves in the large dairy herds at the Ashburton practice.

'Vets provided the extra labour required to carry out large batch disbudding sessions,' explains Jonny.

'First of all, the calves are sedated. The vets could then carry out disbudding, remove supernumerary teats and vaccinate them, in a stress-free and very timely manner – for both calves and workforce.

'Like UK farmers, there is a focus on rearing heifers to the correct size and stature to optimise the age at first calving. With food conversion efficiency at its highest in the youngest calves, great importance has been placed on growth rates from an early age. So as a further strategy to reduce the impact of disbudding, many farms were administering an anti-inflammatory to provide pain relief as part of the disbudding routine.'

Jonny has now adopted this batch-disbudding approach for some of his larger UK dairy farms.

Performance data

Farms are strictly budgeted by their bank managers,' says Jonny. 'When there is a milk price drop, there is pressure to reduce expenditure in all areas. There is accurate cost-benefit analysis for most inputs into the farming system, in particular, veterinary investment.

'In the past, farmers would have cut down on synchronisation programmes for non-bullers to reduce immediate spend. But nowadays, synchronisation has become part of the yearly routine as an investment in the herd. It prevents increased culls and reduced productivity the following year, which would be far more profit-damaging than reducing vet spend.

'The seasonal nature of the farming system in New Zealand allows for accurate number-crunching and hence, a very real understanding of the on-farm economic drivers.

'At the Waikato practice, a farm's performance was tracked using specific targets, such as the 3-week submission rate, 6-week in-calf rate and 10 week not-in-calf rate.

'Here at the Willows practice, we are now adopting the same approach to increase our ability to identify shortfalls quickly, and act on these for both the present season and for the following seasons.

'The 6-week in-calf rate is closely linked to farm profitability through improved days in milk and culling rates. These figures are relatively easy to calculate in block calving systems, but are equally important for tracking fertility in all year round calving herds. With accurate recording of services, we can generate 21-day pregnancy rates, and track weekly in-calf targets which have a distinct practical use'.

Dry cows out-wintered on kale near Ashburton, Canterbury with Mount Hutt in the background.

An example of one of the new cow 'barns' that are being erected in parts of Canterbury for housing animals year round.

ROD WELFORD, MILLCROFT VETERINARY GROUP

The changing landscape of tick disease

2015 marks the 25th year of my veterinary career serving the livestock farms of North West Cumbria, from the dairy cows grazing the Solway coast to the sheep that graze the highest fells in England.

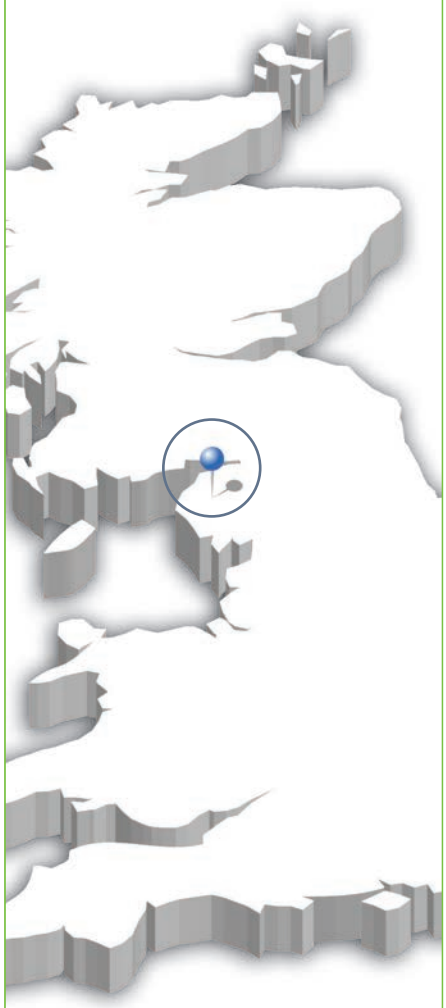
The diseases we witness can be governed by the landscape. This is especially true for the north-west quadrant of the Lake District National Park, where much of the high fell is common land grazed by the hefted Herdwick or Swaledale. Sheep are gathered from the fell for key interventions such as tupping, lambing, clipping and weaning. At these times a head count (historically conducted in local dialect, yan, tyan, tethera, methera, pimp etc.) will indicate those missing; colloquially termed 'lost to the fell'. The variations can be profound with areas recognised as 'dirty fells' and others 'clean fells'. 'Dirty fells' can witness annual losses of 15% of lambs at foot and 10% of gimmer yearlings returning to the fell. When naïve sheep are put to dirty pasture these losses can exceed 50%.

So what makes a fell dirty? And why do fell farms report increasing losses, and greater incidence of 'cravocked' lambs: those lame, light and failing to thrive?

To manage fell sheep you have to understand their neighbours on the fell; ticks. *Ixodes ricinus* is the major sheep tick here in the North, (Haemophylis and Dermacentor can affect areas of southern England and Wales). Ticks live in the deep moist vegetation, taking a blood meal from various hosts (bird, rabbit or sheep) for only 10-14 days over their three year life cycle, *(Figure 1.)* They are active above 7°C, when they 'quest' by seeking a host before returning to their vegetative mat. A spring and autumn peak are recorded, but we witness tick activity almost year round. Not surprising when you consider secluded south facing slopes.

Death due to tick-borne disease is becoming a more common sight on the Cumbrian fells

Lorton



Veterinary surgeon	Rod Welford
XLVets practice	Millcroft Veterinary Group

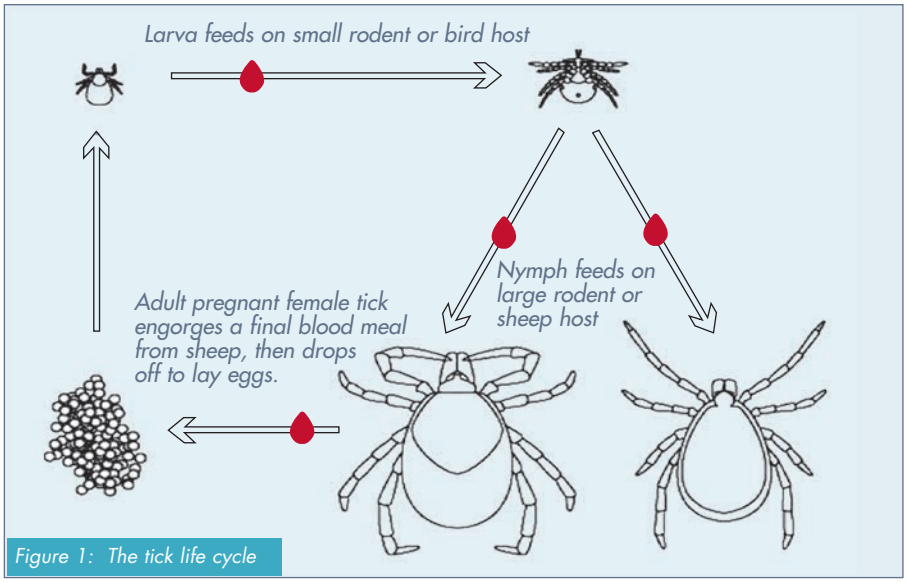


Figure 1: The tick life cycle

Ticks carry and transfer disease often grouped as 'tick-borne diseases'. It's the effect of these that we most often witness in sheep. But what are they?

Louping-ill: A flavivirus that causes encephalitis. Its name comes from the characteristic lolloping gait due to infection of the nervous system. However most are found dead or in a state of TNE (Terminal Nervous Extremis), generally indicating imminent death.

Tick pyaemia: A blood-borne staphylococcal infection introduced by the feeding tick. It can disseminate into joints leaving a chronic lameness often termed 'cripples'.

Tick-borne fever (TBF) is caused by *Anaplasma phagocytophilia*. This invades the white blood cells that are the soldiers of the body's immune system. TBF drags down the body's immune system leaving it vulnerable to attack from other infections, such as the two key tick-borne diseases above.

If you are finding ticks on sheep and witnessing losses or the symptoms above then it is important to distinguish which tick-borne diseases you are facing. Sheep presented in a terminal nervous state are best sacrificed for post mortem investigation. Bloods taken from a cohort of older sheep that graze the same area can indicate the wider picture. From the early 2000s farmers were reporting a rising concern over tick-related disease. At Millcroft Veterinary Group we decided to investigate the tick diseases in order to map out the dirty fells. During the clipping gathers of 2003-2005 we sampled six ewes from 24 farms that cover the northwest quadrant of the Lake District national park, the results are shown in *Figure 2*.

The Louping-ill sero-negative fells were consistent with those locally seeing less tick-borne disease and termed 'clean fells'. In the summer of 2014, Chris Sharman, a local vet student, re-ran this study to assess the changing picture that was being fed back from some farms. This work was supported by Amanda Carson of AHPA and the HSBA.

The results *(Figure 3)* show that the geographic range of louping-ill has extended into previously clean areas. In 2003-2005 41% of holdings tested were clean. This had reduced to 19% clean by 2014.

We also tested for tick-borne fever, both to help validate an evolving PCR test and to map its distribution. The results confirmed our opinion that tick-borne fever is fairly ubiquitous on the fells. It can be a transient infection of sheep but the associated pyrexia can leave rams temporarily infertile, or cause abortion when pregnant ewes are exposed. Concurrent infection with louping-ill will precipitate losses.

Tick pyaemia is a common sequel to tick feeding, as the Staphyococcal bug is carried on a sheep's skin. With a high challenge or in weakened sheep (e.g. concurrent tick-borne fever) it can induce losses or leave light chronic lame lambs: 'cripples'.

Why is there more tick-borne disease in recent years?

Ticks and the diseases they carry are not new to the fells. What has changed is the way the fells are managed. Environmental schemes have encouraged farmers to reduce stocking rates on the fell. The result is a noticeable increase in vegetation on the fells, such as bracken, that is ideal tick habitat. More sheep are wintered off the fell and hence get less opportunity to harden themselves to the TBD by accruing gradual exposure and immunity.

Figure 2: Fells and commons showing evidence of louping-ill in 2003-2005

Figure 3: Fells and commons showing evidence of louping-ill in 2014

Disease = balance of immune status versus tick-borne challenge

What can be done to reduce losses to tick disease?

Key is knowing which diseases the tick might carry and the aim is to reduce challenge whilst encouraging immunity.

- The general rule is to manage the introduction of younger naïve sheep in order to encourage a gradual exposure, and natural immunity. Avoid putting naïve sheep on dirtiest fells.
- Buffer the tick numbers by timely application of synthetic pyrethroid (SP) pour-ons. Tick prevention requires a line applied between the fleece (as opposed to the fan application indicated for blow-fly)
- Where louping-ill is of concern, the louping-ill vaccine can protect naïve sheep, when used in advance of the challenge.

Ticks spend most of their life on the ground only feeding for 17 days of their three year life.

Bracken on the fell provides the ideal environment for the tick

If ticks are a problem in your local area, contact your XLVets practice to discuss treatment programmes and flock management options to help reduce losses to tick-borne disease.

GRADUATE DIARY

Katherine Lumb, BVSc MSc MRCVS

Bishopton Veterinary Group

About me

I graduated from the University of Liverpool in summer 2014 and joined the ten vet strong, ruminant team at Bishopton Vets shortly after. An interest in farm animal production and the maintenance and promotion of production efficiency was a key factor in my decision to become a vet and is something that I had a primary interest in throughout vet school training, pushing me to want to work in farm animal practice. I started the XLVets Graduate Programme in September 2014 alongside eleven other recently qualified vets to help develop our skills and interests in farm animal practice. I have a keen interest in infectious disease control and youngstock health and management and would like to develop my interests and skills in these areas further as my career develops. I also have a strong working link with RAFT Solutions Ltd regularly undertaking industry led research projects alongside clinical work. Outside of work I enjoy mountaineering and cycling and am a keen singer.

It shouldn't happen to a vet

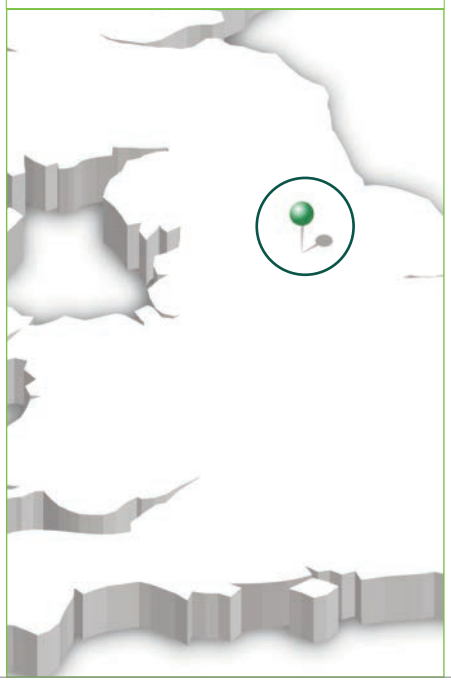
Growing up in North Yorkshire reading the James Herriot books was a staple as a child, but since starting work I now truly understand that although they made for good reading, the reality is that those stories weren't really stories at all. In my brief time in the profession so far I have already encountered several situations that have an 'It Shouldn't Happen to a Vet' kind of feeling...

Calving cows is a situation fraught with the potential for embarrassing incidents, not necessarily directly linked to the poor animal from which you are trying to extract a calf. Take for instance 'the jack'; this is, I suppose, an obvious threat, but position yourself on the wrong side of it when attached to a cow insistent on going down and you can soon find yourself flung embarrassingly across a straw yard, only to emerge with several bits of mucky straw sticking out at every angle from your hair, not the most professional/ attractive look!

The truly unseen risk of calvings is, however, the wardrobe damage that occurs. Having a stock of clean T-shirts in the back of the car quickly becomes a necessity as cotton polo shirts seem to work better than 'kitchen paper' at absorbing any form of uterine fluid. There is however, no worse a sound than the ripping of your best work trousers under your waterproofs. Not only is this slightly devastating, but then leads to the awkward situation of trying to wriggle out of your waterproofs whilst having a chat with the farmer and at the same time not flashing your best knickers for the whole world to see.

It has also come to light that muck is very slippery stuff... sounds obvious, but get a bit of a brisk pace on down a moderate slope and one minute you are having a good chat or getting some history details about a case, and the next, SPLAT! You find yourself, legs outstretched, the contents of your box distributed far and wide. There are two ways this situation then goes, you a) show the true pain you are experiencing or b) crack a bit of a joke about it, get back on your feet, and hope no one notices you are walking a little bit strange. It has to be the latter every time, in the vain hope of retaining some dignity.

There is a lot that has developed within the veterinary profession since the days of James Herriot, but it would appear that the true backbone of the profession hasn't really changed that much at all.



GRADUATE DIARY

Matthew Hylands, BVM BVS BVMedSci MRCVS

Lambert, Leonard & May

Progress

Things are progressing quite well up here in Lancashire, everything except the weather that is. With most people now busy battling the rain while trying to get some silage made it gives us a chance to catch up on work that has taken a back seat over the past few busy months.

One of these jobs is downloading all the various data from our farms' milk recordings and using them to produce a report focused on a specific field such as mastitis, fertility or lameness. I'm quickly beginning to realise that this is a significant part of the modern farm vet's workload. Gone are the days when work finishes after all the calls have been ticked off! Luckily I really enjoy the herd health and data analysis side of my job and having completed the XLVets new graduate programme I feel relatively well equipped to accurately comment on most herd health issues.

Last month I was lucky enough to have a friend from vet school come see some EMS with us for a fortnight. This was great company for me on the road, someone to bounce ideas off and an extra pair of hands on farm. In return I hope I managed to share some of my experiences thus far with her and even managed to break her cow kick virginity! This gave me the opportunity to reflect on my days as a student and my steep learning curve since. Despite the lovely Lancashire countryside and people there are still times when I'd swap it all for mid-week £1 pints!

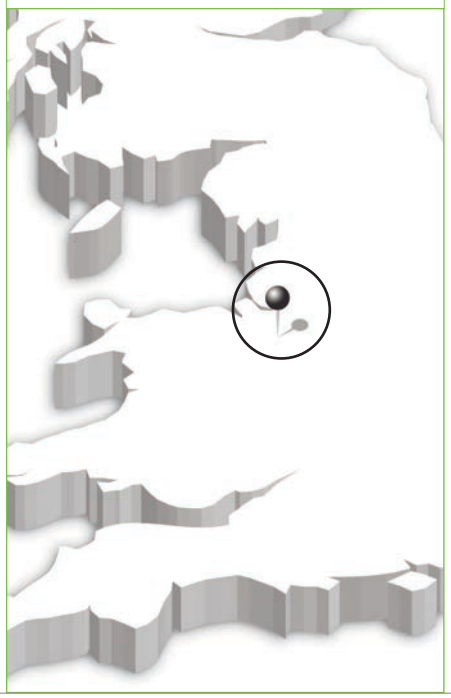
It's not all hard work though; recently we've had enough time to meet up with the other practice for a tour of one of the many micro-breweries of Cheshire… to discuss difficult cases of course. Good beer, good craic, good job!

About me

I graduated from Nottingham vet school in the summer of 2014 shortly before moving to the scenic North West to pursue a career in farm animal practice with the Lancashire branch of Lambert, Leonard and May. Coming from Northern Ireland I'm well used to the rain, however the rural Lancashire accent was another challenge altogether!

With most of our work being dairy based I'm lucky enough to find myself in a position of relative responsibility having a handful of regular routines to my name already. Having recently finished the XLVets Graduate Programme I feel much more confident in day-to-day practice life and have also managed to find myself in a larger network of farm animal new graduates sharing information and experiences on a regular basis.

Outside of work I enjoy shooting of any kind and I've recently bought a mountain bike to make the most of the beautiful fells and moors up here.



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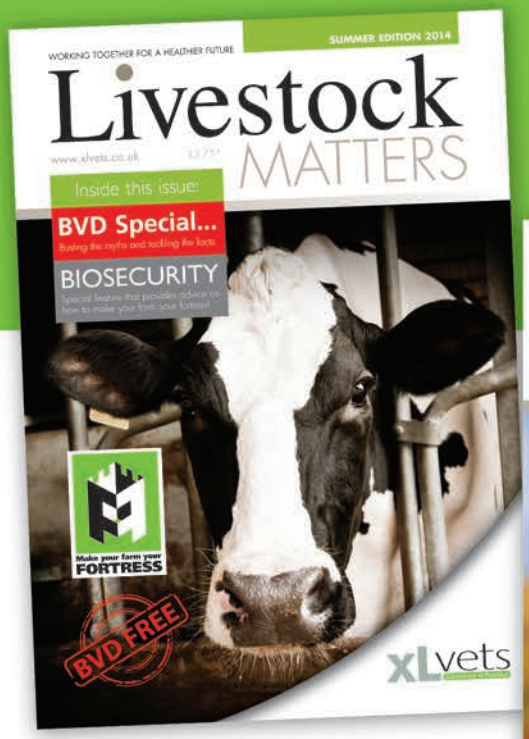

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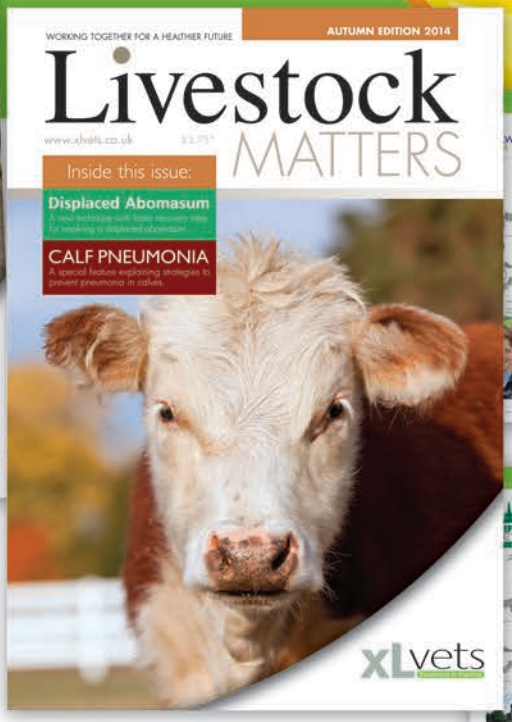

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