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WINTER EDITION 2011

Livestock MATTERS

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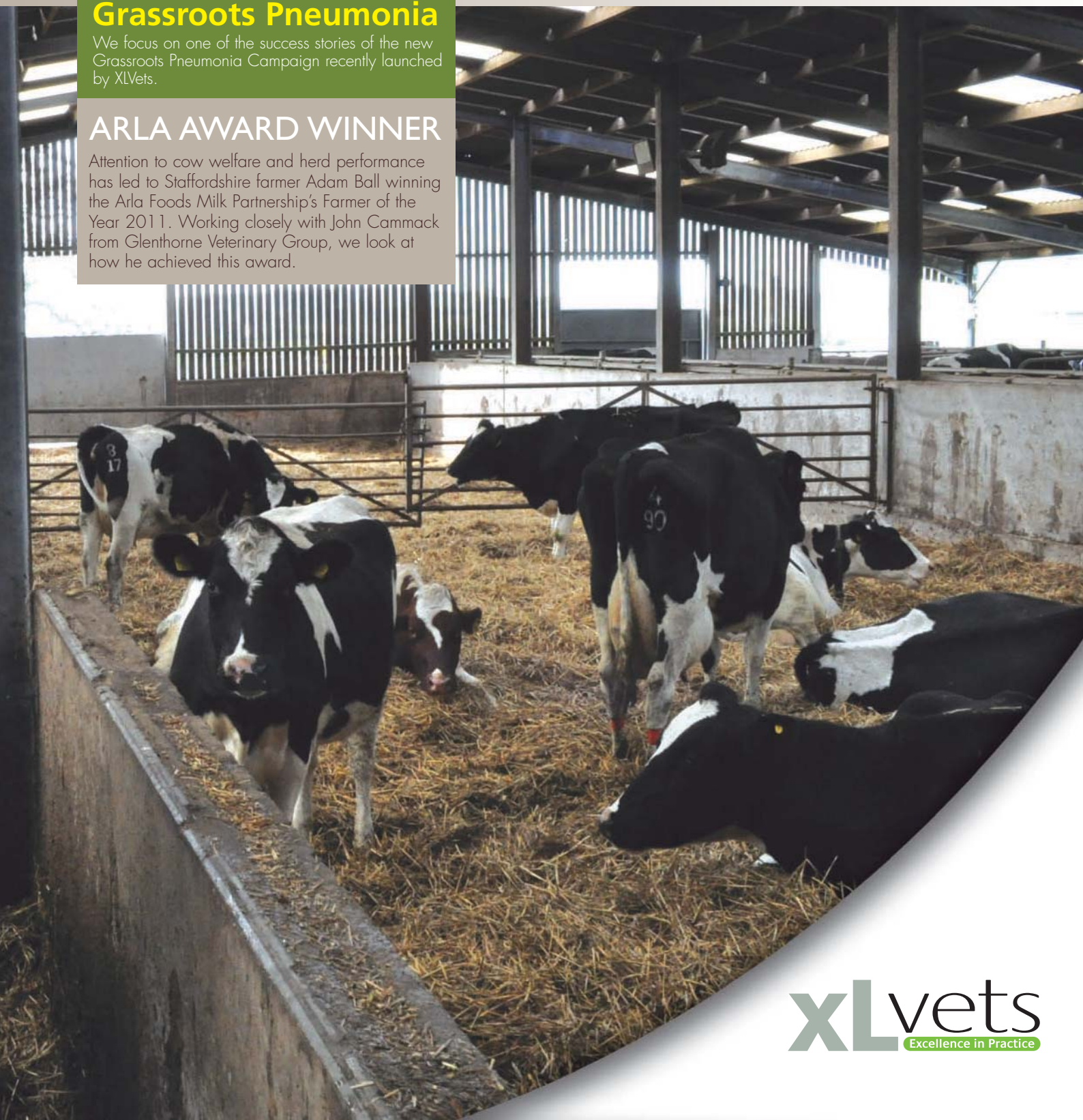
Inside this issue:

Grassroots Pneumonia

We focus on one of the success stories of the new Grassroots Pneumonia Campaign recently launched by XLVets.

ARLA AWARD WINNER

Attention to cow welfare and herd performance has led to Staffordshire farmer Adam Ball winning the Arla Foods Milk Partnership's Farmer of the Year 2011. Working closely with John Cammack from Glenthorne Veterinary Group, we look at how he achieved this award.



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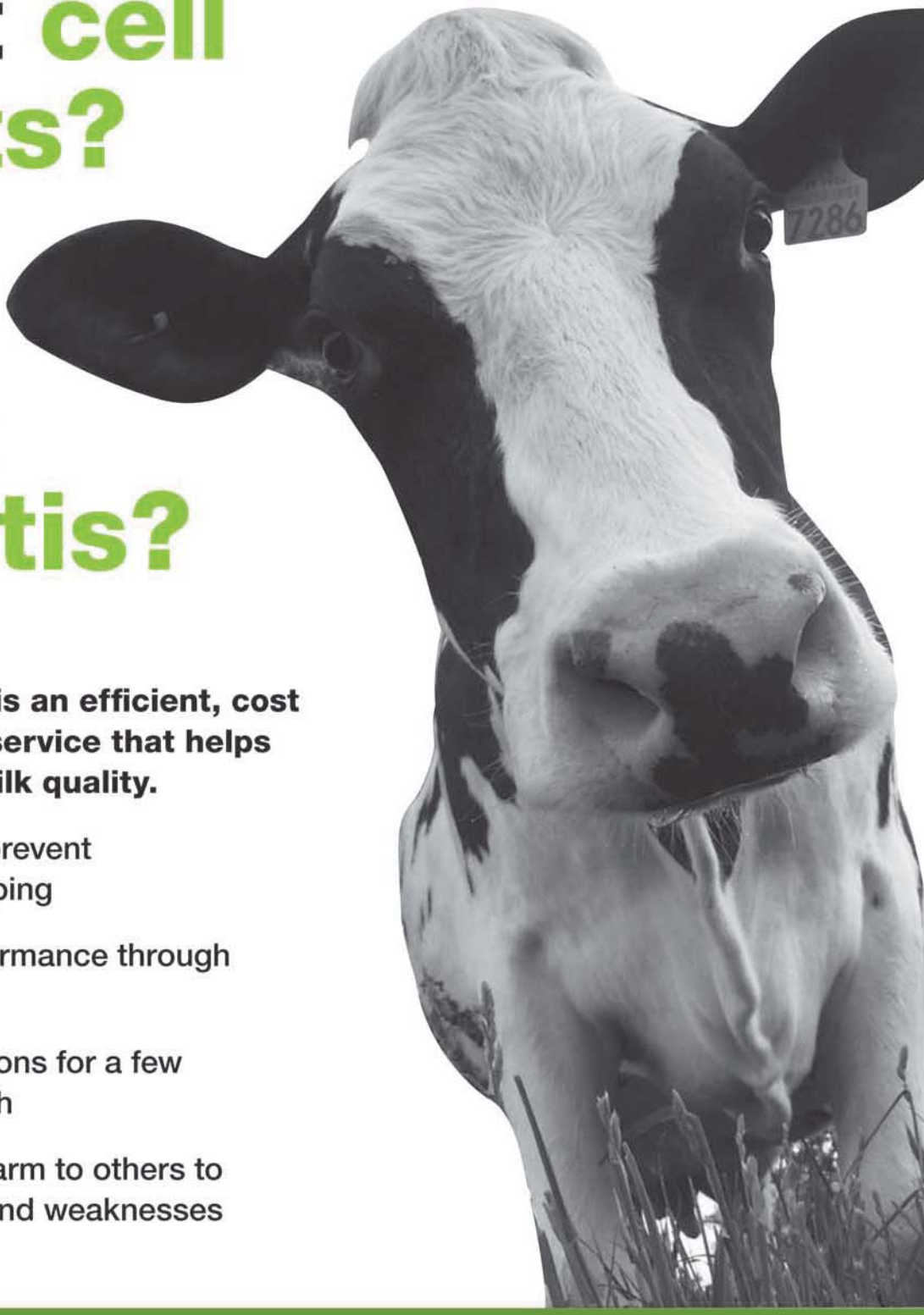
Too much mastitis?



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WINTER EDITION

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THE EDITOR

Welcome to the 'Winter' issue of Livestock Matters...

In this issue we focus on fertility as part of the Grassroots fertility promotional programme that XLVet member practices are currently undertaking. The importance of fertility cannot be underestimated; whether a large or small herd, we see that farmers incorporating routine fertility visits as part of their herd management are reaping the benefits.

Heat detection is also a crucial part of maintaining good fertility within a herd and this issue's pull-out and keep guide provides practical tips and advice for improving heat detection on-farm.

We also have updates on Johne's and managing the 'fresh' cow from two XLVet member practices and take a look at the work of Calweton Veterinary Group on preventative measures they are implementing on-farm to combat potential pneumonia problems this winter.

If you require further advice on any of the health issues featured in this magazine please do not hesitate to contact your XLVets practice.

We hope you enjoy this issue of 'Livestock Matters'.

Joanne Dodgson XLVets

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Parklands Veterinary Manager lands top Industry Accolade

Having recently invested in their new state of the art facilities at Dungannon, Parklands Veterinary Clinic is back in the forefront of the veterinary/agricultural industry when one of their managers landed the top accolade in the agricultural industry.

David Mulligan the practice manager of Parklands is no stranger to success having been awarded the title of the UK Veterinary Practice Manager of the year in 2009. At the Over the Counter 2011 Awards ceremony recently hosted at the House of Lords, London, David walked off with the industry's top award, winning the Mastermind Award of 2011.

Now in its fifth year the Over the Counter Awards are designed to recognise and reward individuals and companies that stand head and shoulders above their competitors and who can act as ambassadors for the industry in driving forward standards of customer service and advice. The Mastermind Award category is the industry's top award, which identifies individuals who act as mentors in both their knowledge and how they choose to convey it. As part of this process each of the candidates for the award was interviewed to ascertain their understanding of regulatory and legislative issues and their understanding of the industry as a whole.

Having been originally nominated by Philip Clarke, the Local Merial Animal Health Territory Manager, for the title of 'SQP of the year' the judges, having viewed that nomination, came back to Philip to see if he would consider allowing David's name to go forward for their top award. Philip found this an easy decision to make, as he explains: 'knowing the commitment that David has to Parklands Vet Group and to the clients they service, I was pleased to see that even at the nomination stage this nomination stood out from the field.' On congratulating David after the event, Philip added 'despite the fact that this award draws entrants from throughout the whole UK agricultural industry, the decision of the judges recognises the contribution that Parklands, and David, make to the Northern Ireland farming industry.'

Ian Stewart MRCVS of Parklands is naturally delighted that David's hard work and enthusiasm has been recognised again by the agricultural and veterinary industry: 'this is a fantastic achievement and the practice is proud to have David working as practice manager. Parklands strives to provide the ultimate service to its clients and farm businesses by investing in facilities, equipment and training of its staff and farm clients.'

In recognising the contribution that David has made to the veterinary/agricultural industry in Northern Ireland over the past year, the judges highlighted the role David plays organising training and education for his colleagues, and also that he had found time to develop and roll out practical FarmSkills training courses to farmers from across Northern Ireland on a wide range of courses, from Cattle Fertility/AI to Sheep Parasite Control, while still carrying out his duties as practice manager. These courses are delivered by the Parklands LANTRA approved trainers who are a combination of vets and SQP's.

BBC Countryfile presenter and farmer, Adam Henson gave the following citation in giving the award, which was generously sponsored by Harper Adams University College: 'David is an inspiration for the animal health industry, in his determination to set standards of training, education and service for the benefit of those around him. Working in a veterinary practice, David uses his knowledge to inspire those around him as to the benefits of expanding their knowledge. He is actively involved in the educational and training requirements of his SQP colleagues as well as his vet's CPD and their clients. The judges were impressed with his desire to champion education and highlighted the fact that he has written and delivered specific livestock modules to farmers across Northern Ireland, which are LANTRA approved.'

In accepting the award David was quick to highlight that while on occasions such as this there may be one name on the award, without the support of his colleagues it could not have happened. David says, 'delivering practical FarmSkills has been a long journey for Parklands since we ran our first major Veterinary Dairy Conference in 2001. But with the investment of the partners, the development of ten qualified SQP's and nine LANTRA Approved Trainers and the cooperation we have received from within the XLVets group and bodies such as the RDC and CAFRE, Parklands has taken a major step forward in providing practical FarmSkills training for livestock farmers in Northern Ireland to complement the excellent educational courses available from CAFRE.

'There was no doubt that on Monday night/Tuesday morning of last week when I was digging channels on the farm to ensure rising water levels would not enter the farm buildings, Awards and the early flight to London was the last thing on my mind. However, now it is over and the water has receded there is plenty of time to reflect on the recognition this Award brings to the practice and to concentrate on how Parklands can seek to improve and deliver valuable services to our clients, for at the end of today without our farming industry none of these Awards could be achieved,' David concludes.

REAL WELFARE INDICATORS FOR PIGS...

Producers will soon have a way of demonstrating real pig welfare using science-based assessment methods.

BPEX is leading a project to develop a system of assessing welfare by looking at the pig itself, not just its environment. It aims to establish benchmarks for real pig welfare that work across all types of production systems.

Lameness, tail lesions, body lesions, hospitalisation and enrichment use were identified as suitable indicators of finisher pigs' wellbeing in pilot trials by BPEX and the University of Bristol. Sows will also be assessed for body condition score, shoulder and vulva lesions.

These indicators will provide a starting point for vets and producers to discuss whether there are any aspects of the pigs' environment or management that could be changed to further improve both welfare and productivity.

More than 20 pig vets were trained earlier in the year and are now making assessments on 180 commercial pig farms. A total of 360 farm visits will be made to gather the information required, with more than half now complete.

Welfare is being evaluated during vets' routine quarterly farm visits, to build up a set of anonymous data and start to identify typical values to benchmark welfare. The assessments cover finishing pigs in straw and non-straw systems as well as indoor and outdoor breeding sow systems.

Dairy Event & Livestock Show 2011

It was another great year for FarmSkills at the Dairy Event and Livestock Show - a huge thanks to all XLVet members who donned the green t-shirts again and helped train show-goers how to set up an AI gun, look for signs of heat in cattle and assess colostrum quality. It was great to see many farmers at the event who have already been on a FarmSkills training course and looking for details of future courses.

AgriScot 2011 - 16th November

AgriScot 2011 enjoyed its biggest turnout yet this year, with some 9,000 visitors descending on the Royal Highland Centre at the showground in Edinburgh.

Once again the XLVets stand was on hand to provide the throng of showgoers with expert knowledge and advice as well as arming them with the skills of heat detection, loading an AI gun and making a halter from a single piece of rope.

Enjoying a more prominent pitch this year ensured a steady stream of interested visitors and willing volunteers for the challenges throughout the day and many of the XLVets members were able to catch up with clients at the show as well as forging links with new farmers and businesses alike.

As well as promoting XLVets to a diverse audience north of the border, FarmSkills were also on hand to offer advice on upcoming courses and training, skilfully assisted by an impressive stilt-walking juggler, who literally stood out from the crowd and drew people to the stand, ensuring a busy day was had by all.

Thanks to all those who helped out on the stand including Neil Laing and Trevor Hamilton from Clyde, Adam Montgomerie from Kingsway, Colin Lindsay from Capontree, Mervyn Drever from Ardene, Ed Hewitt from Armour and Helen Miles from FarmSkills.

£20 MILLION FOR FARMING AND FORESTRY BUSINESSES

A new £20 million fund to help farming, forestry and horticultural businesses to become more efficient at using resources has been launched.

The scheme aims to help businesses to become more profitable, whilst reducing the impact of farming on the environment. £20m is available under FFIS until December 2013; grants are available for capital items. 40% grants are available to farmers in non upland areas (up to 50% in upland areas).

Farmers, foresters, woodland owners, agricultural contractors and horticulturalists can apply for grants of between £2,500 and £25,000 to invest in green projects, new machinery and improvements to animal health and welfare so their businesses can grow in an environmentally friendly way.

The Farming and Forestry Improvement Scheme will fund projects that:

- save energy and reduce carbon emissions;
- reduce dependence on artificial fertilizers through better use of manures;
- improve soil quality;
- improve animal health and welfare;
- save and recycle water; and
- promote woodland management by processing timber more efficiently.

For more information go to http://rdpenetwork.defra.gov.uk/funding-sources/farm-and-forestry-improvement-scheme.

Scarsdale Veterinary Group

Veterinary Surgeon	Chris Parker
XLVets Practice	Scarsdale Veterinary Group

CHRIS PARKER, SCARSDALE VETERINARY GROUP

Regular veterinary visits keep (more than just) fertility on track...

Derbyshire dairy farmer Michael Oulton is keeping herd fertility in very good order thanks to regular fortnightly fertility visits by his vet Chris Parker of Scarsdale Veterinary Practice, and daily visits by a Genus breeding technician.

At Springfield Farm near Ambergate, Michael is currently milking 230 cows (following a recent TB outbreak which saw 25 cows go for slaughter) with an average herd yield of 8,500 litres/cow.

His enviable fertility figures include: a pregnancy rate to first service of 41%, a rolling 100-day in-calf rate of 50%, and a calving interval of 394 days - well below the UK average.

However, herd fertility wasn't always this good. Two years ago, the calving interval had extended to 420 days, prompting Michael to make two key management changes. He signed up to the Genus RMS (Reproduction Management Service) in which daily visits are made by an AI technician to check for bulling cows and to serve them. 'It's another job ticked,' says Michael.

Michael also changed his vet. He wanted specialist dairy vet expertise and experience, and turned to the services of Scarsdale Veterinary Group in Derby. Now, vet Chris Parker makes fortnightly fertility visits and also provides an in-depth herd health report in conjunction with the University of Nottingham's Vet School students.

Scarsdale is one of two vet practices used by Nottingham Veterinary School as an associate farm teaching practice (the other being XLVets' Farm Vet Solutions in Uppingham). A student will work alongside a Scarsdale vet to gain practical experience; farm clients can benefit by having students visit every three months to collect data and complete a full health report on the farm, which includes mastitis and cell count control, condition scoring, fertility and locomotion.

All Scarsdale's clients receiving regular fertility visits are provided with a Herd Pride report which includes the basic data on SCC and fertility. For those, like Michael Oulton, who want more in-depth information, including quarterly trends, then a Total Vet Report can be provided, generated either by the students or Scarsdale's team of vets and technicians.

Other health matters are also discussed during Chris's visits - here discussing how best to prevent badgers getting into feed troughs and coming into contact with youngstock.

Different coloured tailpaints are an integral part of the Genus RMS service indicating which cows are available to breed or already served/PD'd.

The fertility visit

In advance of Chris's fertility visits, Michael and his RMS technician draw up a list of cows for inspection. Michael is aiming to tighten the calving interval further and so Chris is now examining cows earlier, at 30-40 days post-calving instead of the usual 50 days. Any cows not seen bulling are also examined for evidence of infections or cystic ovaries.

Chris explains: 'It's important to clear up any residual infection before the cow is served. We want every cow to be cycling and clear by 50 days, so that the first service can be made as soon as possible.'

'Nowadays, every cow is examined at least once in the first 100 days post-calving. The critical thing is for them to be served within 100 days of calving.'

He adds: 'I'm a firm believer that the combination of a good RMS technician working with the vet is an immeasurable help in improving fertility parameters.'

Over the past few months, the Total Vet Report, as recorded by the vet students, has shown an increased level of cows returning to service. 'We need to investigate and establish the cause,' says Chris. 'That's the advantage of the fuller report - it shows an active short term picture not just the 12 month rolling average.'

A sweeper bull had been used on the farm in the past. But this meant it was impossible to tell whether a cow was potentially in-calf or not, and so another cycle would go by before intervention. This had been contributing to the extended calving intervals, but now all cows are served by AI.

During Chris' fertility visit, dry cows will also be checked over and condition scored. Chris says: 'To ensure good fertility, it's important that cows lose no more than 0.5 to 1.0 between the dry cow stage and the first check after calving. At Springfield Farm, the average change in condition is -0.36, which is very good.'

Body condition scoring is done on all the calved cows presented for fertility inspection, as well as the dry cows.

Michael adds: 'As a herd gets bigger it becomes more difficult to manage its fertility. We have found that regular fertility visits together with the RMS system is a very good way for us to keep fertility on track.'

Other health issues

The regular farm visits also enable other health issues to be given attention.

Chris explains: 'At Springfield Farm, a vaccination programme is in place to prevent calf pneumonia. I was here the other week just before calves were to be vaccinated, but some calves had already been affected with pneumonia. So blood samples were taken to check which of the three common pneumonia viruses were present, and ensure we had prescribed an appropriate vaccine. In fact, all three viruses were present, yet the vaccine would only protect against two of them. So now Michael and his staff are going to keep a close eye on calf health and we'll assess whether to use an additional vaccine to combat the third virus. We're not doing this straight away because it may not be needed. It's a case of weighing up the risks and costs, knowing the farm and its stock management, and getting a careful balance between total disease prevention and economics.'

Michael finds the quarterly herd health report very useful: 'The data gives us a very accurate and up to date account of our fertility, lameness and cell counts. So we can focus on getting specific issues under control. For instance, we had a high level of digital dermatitis - the report found that the footbath we were using was not effective so we changed it and now also use an antibiotic in the solution. As a consequence we've halved our incidence of lameness.'

Chris explains: 'By just being here on the farm, I'm on hand to give Michael advice on a whole host of herd management and health issues. As well as calf health and lameness, we have recently been discussing how to prevent badgers from getting into silage clamps and feed troughs, and managing stock in TB shutdowns.'

The regular fertility visits are now part of the herd management routine. With fertility largely on track and under control, and herd locomotion improved, Chris and Michael are now going to focus on reducing cell counts.

Scarsdale's Chris Parker makes fortnightly visits to PD served cows and examine those not seen bulling.

Michael and Chris review the latest findings in the quarterly herd health report - it provides an accurate account of fertility, lameness and cell counts.

THE GLENTHORNE VETERINARY GROUP
EXCELLENCE IN ANIMAL CARE

Veterinary Surgeon	John Cammack
XLVets Practice	Glenthorne Veterinary Group

Attention to cow welfare and herd performance has led to Staffordshire farmer Adam Ball winning the Arla Foods Milk Partnership's Farmer of the Year 2011.

Adam Ball, Arla Farmer of the Year

Attention to herd health and welfare has helped dairy farmer Adam Ball, of The Spond Farm, near Alton in north Staffordshire to win this year's Arla Foods Milk Partnership's Farmer of the Year.

Over the past five years, Adam, and his father Peter, have been working more closely with their vet John Cammack of Glenthorne Veterinary Practice to improve herd fertility and welfare.

In 2007, the herd was expanded from 120 to 200 cows. This involved some significant changes and investments including silage clamps and a new parlour with improvements to cow housing. Systems have now been adopted to ensure good herd fertility with a particular focus on cow management in the transition period. Strategies to control incidence of lameness and keep mastitis under control are also in place. Together, these changes have enabled a five-fold increase in profit.


Adam Ball

Herd fertility

Previously, John visited Spond Farm to check cow fertility on an irregular basis - sometimes it could be up to six weeks between visits. The calving interval stretched out to 435 days.

But now visits are regular and monthly - John PD's cows from 30 days post service, and examines any cows not seen bulling by 50 days, or not served by 60 days.

John explains: 'Adam now has good PD results with usually more than 80% of cows being positive, so we can get away with a monthly frequency, rather than the recommended fortnightly visit for a herd of this size.

'Making a regular visit to examine a group of cows is a far more efficient use of time than just coming round to look at one problem cow. It also cuts the number of fire-brigade call-outs and presents a good opportunity to discuss other aspects of herd health and management.'

Two years ago, Adam installed Heatime heat detection, he explains: 'When we get very busy, or when the silage was poor, we were struggling to see cows bulling. For silent heats, it's also a great tool. We now have a really good submsission rate.'

The calving index at The Spond Farm is currently running at 395 days, although it has been as low as 385 days. The 100-day in-calf rate is 45%. As a consequence, the milk sold per cow per year has risen from 7,800 litres to 8,266 litres. High yielders are kept in at night with access to feed, and by day, have access to both feed troughs and grazing.

Culling rate is on target at 20%. Adam adds: We have had some cows culled for TB but at least with cows getting in-calf we are not losing many cows through infertility.'


The Spond Farm Team

Housing

A new shed was constructed in 2007 to house a herringbone milking parlour, 90 cubicles, and a large straw yard which can be divided into pens.

When cows are three weeks away from calving they are brought into one of the straw pen areas and put onto a DCAB diet. Once calved they are moved into an adjacent pen, still in the same building and still on straw, not cubicles, for a further two weeks. They then go straight onto the milking cow ration.

John explains: 'The transition period is an important factor impacting on fertility. This system is designed to minimise change and stress and enable their post-calving performance to be monitored. The way Adam manages cows through the transition period reduces the extent of the post calving energy dip and gets cows off to a flying start in their lactation.There are minimal metabolic problems in the fresh calved cows with no LDAs in the past three years and few post calving infections.

This new shed is used to house the high yielders, but once they are in-calf and giving less than 30 litres they are moved into an older, refurbished cubicle shed. John helped Adam apply for funding to update this existing building through the RDPE Farm Health Capital Grant scheme. Inside the shed, a row of cubicles was removed to allow wider passageways and longer and wider cubicles beds to be installed. Cow mattresses were added for comfort.

In both sheds, following a FarmSkills Cow Signals training course held on the farm and run by John, a qualified Cow Signals trainer, Adam has replaced some of the conventional troughs with tipover troughs. This is to make it easier to keep the drinking water clean and palatable. Adjustments to the cubicle set up were also made following the workshop.

Johne's disease

In expanding the herd, 50 animals were bought-in from abroad. Adam and John took the approach that this created a high risk for bringing infectious diseases into the herd, and so adopted a blanket vaccination strategy for IBR, BVD and leptospirosis.

For Johne's disease, a different approach has been taken - milk samples from individual cows were analysed to test for presence of the disease. Johne's disease was found in four cows and each has been given a red ear tag. This allows their health and body condition to be monitored more easily and makes sure they are managed correctly at calving. Other strategies in place for Johne's-positive cows: they are only bred to a beef bull; they are calved in an isolation box; and their calves are taken at birth and fed colostrum from a Johne's-free cow. The whole herd is now tested quarterly for Johne's disease.

JOHN CAMMACK

The transition period is an important factor impacting on fertility. The way Adam manages cows through the transition period reduces the extent of the post calving energy dip and gets the cows off to a flying start in their lactation…

Lameness

Lameness has been another area of improvement. A foot-trimmer visits monthly to trim cows' feet as they are dried off. Cows are mobility scored in advance of his arrival and so he can also look at any other animals identified with a problem. In-between times, Adam does any fire-brigade work himself. Cows go through a formalin-based footbath five nights per week.

Mastitis control

Now that good fertility has been achieved and is being maintained, the next priority is reducing mastitis and lowering cell counts. These currently range from 150,000 - 170,000 SCC/ml Adam uses the Clover Cell Check service and it has highlighted the dry period as an area on which to focus.

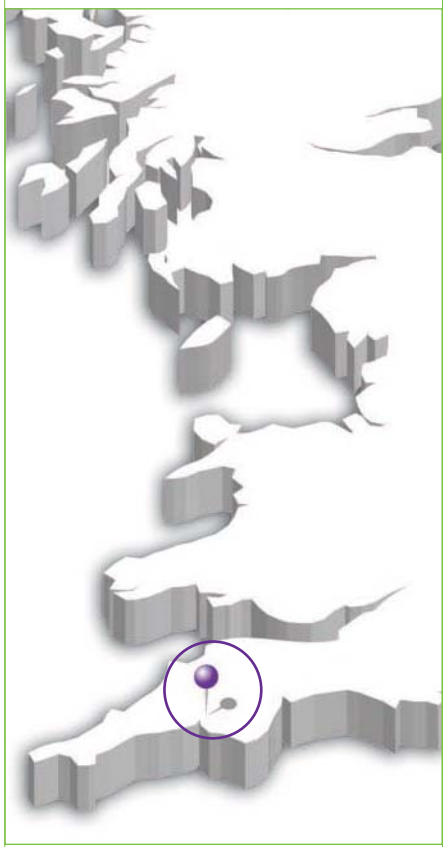
Glenthorne's vet Alex Sindrey has been working with Adam to apply the DairyCo Mastitis Control Plan. Adam explains: 'This identified that better hygiene is needed in the straw yards, and the stocking rate needed reducing.'

Grass roots

Pneumonia

The story so far...

CALWETON VETERINARY GROUP



Veterinary Surgeon	Miranda Josephson
XLVets Practice	Calweton Veterinary Group

MIRANDA JOSEPHSON, CALWETON VETERINARY GROUP

Since launching the Grassroots Pneumonia campaign, I have become even more convinced of the value to our farmers of a co-ordinated approach to respiratory disease...

Calf pneumonia is a common problem on almost all farms. It is a very complex disease, yet all too often it is addressed as an aside, and the approach to its control is one of treatment, rather than prevention. The XLVets Grassroots Pneumonia campaign aims to change that.

Change is already afoot for clients of Calweton Veterinary Group in Callington, Cornwall, where three autumn pneumonia meetings have already been held. At the meetings farmers are treated to a hot meal and a presentation introducing the concept that pneumonia is a multi-factorial disease. The different aspects of susceptibility to disease are covered, in addition to how we can influence this. The importance of history, diagnoses, good treatment protocols and possible vaccination strategies are discussed. The true cost - of which the vet-bill is only a very small part - of pneumonia outbreaks is well illustrated by a Cost-Calculator, into which attendees are able to enter their own figures. A heavy emphasis is placed on the importance of good ventilation - a vital part of any successful pneumonia-control strategy.

These meetings have served as a platform from which farmers have booked individual visits. 'We have found farm visits to be very valuable, as the best advice for different farms varies widely - as illustrated by the following two case studies,' says Miranda.

Case Study One

This summer-calving dairy herd rears all its own heifer replacements. These are housed in two different sheds. In the traditional shed, pneumonia is an extremely rare event and only isolated cases are seen. In the new shed, however, the whole group has been affected by pneumonia in November or December for the past three winters. These are healthy, well-managed calves; colostrum provision and onward feeding is very good, group sizes are small and bedding is dry.

A ventilation assessment was carried out. This involves measuring the floorspace of the building and the pitch of the roof, and takes into account the number of animals housed and their average weights. From this it is possible to calculate how big the inlets at the eaves, and the outlets at the ridge, need to be.

The inlet in the new shed was found to be ample. Outlet however is inadequate; 1.61m^2 is required, the 16 ridge-vents provide 1.09m^2 (see Figure 1). The additional 0.52m^2 required can be achieved by cutting slots 10cm by 33cm into each vent. The amount of rainwater coming through these slots is almost literally a drop in the ocean compared with the amount of moisture the calves themselves produce (through urination, sweat, etc). In addition, a solid gate is to be placed midway along the shed perpendicular to the feed barrier, to provide additional shelter from any strong winds from the more open end of the shed.

Figure 1: The ridge in the foreground has the maximum possible number of ridge vents - but provides much less than the required outlet.

The traditional shed was also assessed. In theory, this shed requires an outlet of 1.15m^2 and inlets of 2.3m^2. The actual inlet is 0.87m^2, and there is no visible outlet. Yet pneumonia is far from an issue in this building. The roof has a very steep pitch, and the slate and wood roof materials 'breathe' (as seen in Figures 2 a, b and c) - meaning the ventilation is actually very good. In addition, great care is taken to ensure bedding remains dry. This illustrates the fact that one can't just look at the maths. It would be a bold and foolish soul who suggested making any alterations to this building!

Figure 2a

Figures 2 a, b & c: This traditional shed illustrates the fact that ventilation is even less simple than we thought - there is virtually no visible inlet or outlet, yet the ventilation is adequate.

Figure 2b

Figure 2c

Vaccination had been considered prior to the ventilation assessment, but the farmer has decided to make the necessary shed alterations with the expectation that this may prevent further pneumonia outbreaks. A robust treatment protocol has been designed should pneumonia occur. This entails administering both an antibiotic and an anti-inflammatory drug to affected calves, and also suggests a cut-off point at which whole-group antibiotic treatment should be administered. It has been demonstrated that this approach can reduce overall drug usage and produce better weight gains.

Case Study Two

The visit focused on the bull-beef enterprise on this farm. Dairy bull calves are bought from mixed sources in batches of 20-22 calves, at 3 weeks old. Disease, as a result of pneumonia is frequent, and it is not uncommon for a couple of calves per batch to die. Problems are mainly seen when calves are 8-9 weeks old. The single shed houses a total of around 80 animals in four groups at any one time, with ages ranging from 3 weeks to 15 months. All calves are dosed with Zactran™ on arrival.

In ventilation terms, this shed was found to be extremely good. Space boarding provides ample inlet, there are no draughts, and the 30cm gap running almost the full length of the ridge provides generous outlet - the only shed of the many I have so far assessed to do so. The pneumonia problems here stem not from poor ventilation, but from a variety of other causes, the most important of which are:

1. Insufficient colostrum at birth
2. Stress of transport and mixing
3. Mixed ages in the same airspace

Without changing the nature of the enterprise, nothing can be done about point one. Administering Zactran™ on arrival reduces the impact of the second point, by providing protection for two weeks. The third problem will be reduced by vaccination. Given the age at which pneumonia problems are seen, the most appropriate vaccine is one which will be effective even when administered to very young calves. Rispoval Intranasal can be administered one week after arrival (not immediately, as the stress of arrival will interfere with how well the calf responds to the vaccine and therefore how good the immunity will be). It has also been suggested that younger calves are housed in smaller groups, for example half a dozen per pen, as this has been shown to reduce the risk of a variety of diseases.

Due to individual variation in any population, it is likely that some pneumonia will still be seen. As with Case One, a treatment protocol has been devised.

CONCLUSION

As the case studies indicate, there is a lot more to pneumonia than a bottle of antibiotic.

Since launching the Grassroots Pneumonia campaign, I have become even more convinced of the value to our farmers of a co-ordinated approach to respiratory disease. I am becoming increasingly adept at wielding a laser-measurer and a tape-measure (see Figures 3 a & b), and even a calculator. I look forward to receiving feedback from our farmers at the end of the winter (or sooner, should problems occur) as to what they feel has been beneficial, and where we can improve even further.

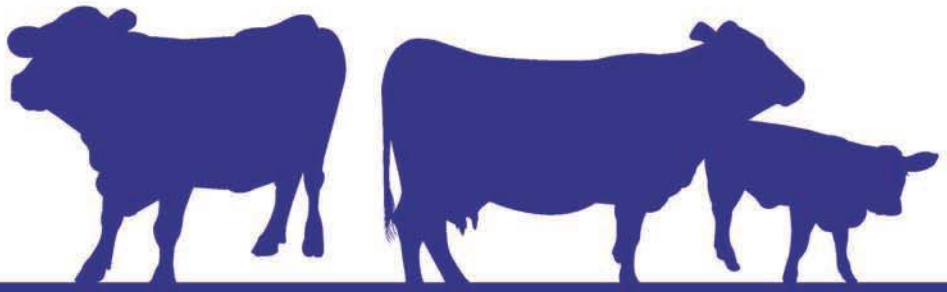
Watch this space!

Figure 3a

Figures 3 a & b: Miranda taking measurements during a ventilation assessment.

Figure 3b

Grass roots | Pneumonia



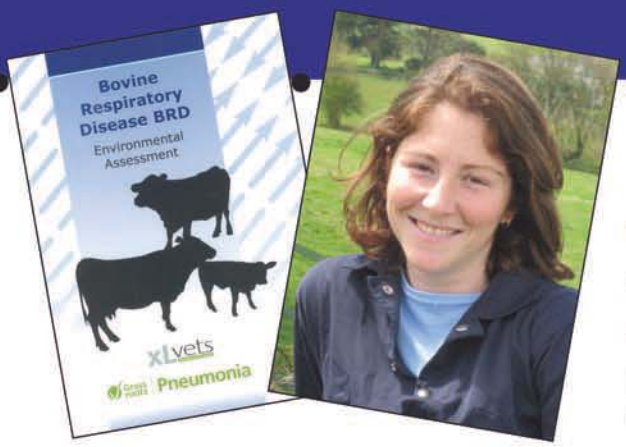
xLvets
Excellence in Practice

Before winter takes hold book your pneumonia environmental assessment

Key Points for a pneumonia investigation:

- Evaluation of your farm's system and management
- Assessment of the housing
- Creation of treatment protocols
- Consider carrying out diagnostic tests
- Discuss vaccination possibilities

For more information about Grassroots Pneumonia Environmental Assessments please contact your XLVets practice



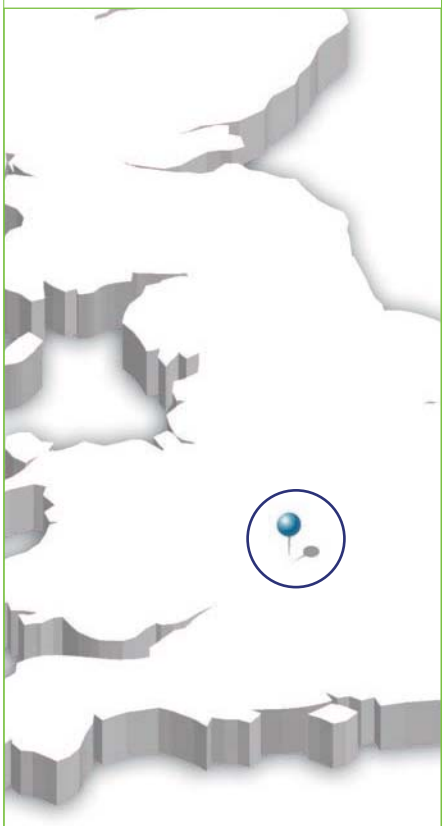
"Since launching the Grassroots Pneumonia Campaign, I have become even more convinced of the value to our farmers of a co-ordinated approach to respiratory disease"

Miranda Josephson BVSc, MRCVS
Calweton Veterinary Group, a member of XLVets

STEVE BORSBERRY, 608 FARM AND EQUINE VETERINARY SURGEONS

The 'Fresh' Cow

608



Veterinary Surgeon	Steve Borsberry
XLVets Practice	608 Farm and Equine Veterinary Surgeons

Peri-parturient diseases have a huge effect on the longevity of a cow; they can have an effect on lactation, fertility, lameness, mastitis, milk yield and thus lifetime production, reducing the profitability of the cow and the herd while also increasing the carbon footprint of the farm.

Reducing the incidence of peri-parturient disease can be complex, however, attention to the diet and management of the transition cow may well be the key for many enterprises.

The diet supplied to the close-up cow needs to:

- Be palatable
- Provide sufficient energy and protein to maintain body condition
- Be provided at an energy density to maximise rumen size
- Provide some post-partum components in order to initiate changes in the rumen bacteria to maximise fermentation and utilisation of the lactation diet.

MAXIMISE RUMEN FUNCTION

Figures 1a, 1b and 1c are an estimation of the rumen size of many cows at calving and then four weeks and ten weeks post-calving. With appropriate feed management of the pre-calving cow it is possible to create a rumen size shown in 1b at calving; such a cow will obviously have a far greater DMI than 1a. A 1a cow has a greater disadvantage; not being able to eat enough and thus is more likely to suffer from a greater negative energy balance (NEB). Whenever discussing diets for the dry and fresh cow it is vital to reduce competition at the feed face; I would suggest a minimum of 3 feet/cow and the feed needs to be fresh, and available 24 hrs/day.

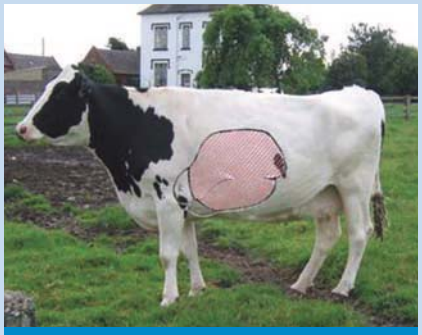


Figure 1a: An estimation of rumen size at calving

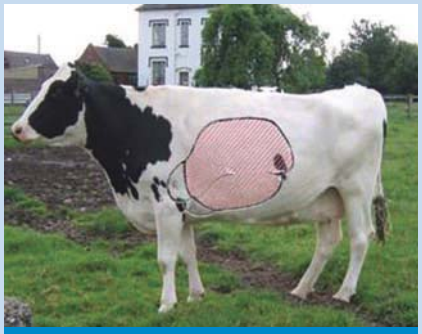


Figure 1b: An estimation of rumen size at 4 weeks post-calving

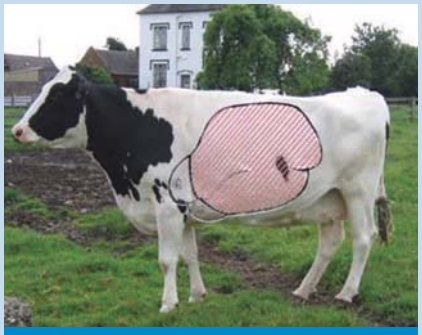


Figure 1c: An estimation of rumen size at 10 weeks post-calving

Calving is routinely the most stressful time of a cow or heifer's life (see Figure 2). Around this time there are tremendous hormonal and metabolic changes. One consequence of this is that the cow's/heifer's immunological system is suppressed making her more susceptible to disease. A complicating factor to this increased susceptibility is that the modern Holstein cow has a reduced innate immunity compared with a cross-bred animal. Added stressors such as inappropriate nutrition of the transition cow will undoubtedly increase the susceptibility to infections such as mastitis, metritis and endometritis. Work in North America has shown that diseases will have a negative effect on the lactation yield (see Table 1.)

Table 1: The effect of disease on lactation yield

Disease	Loss in yield*
Metritis	250 kg milk
Ketosis	1,100 kg milk
Left displaced abomasum (LDA)	1,700 kg milk

*These are average figures and delayed treatments can greatly increase the loss of yield

Figure 2: Calving is the most stressful time in a cow's production cycle

It is difficult to compare herds simply by recording disease incidence, as the more examinations/investigations that are performed, the more disease will be diagnosed. Provided the same protocols are carried out, it is possible to compare farms, and year to year variations. Metritis and endometritis can 'only' be confirmed by a vaginal examination; it is vital they are diagnosed early and treated promptly. Metritis may have a lesser effect on milk production compared with Left Displaced Abomasums (LDA's) but the influence on future fertility can be dramatic, increasing the chances of being culled as barreners.

One farm has installed a 'S C R H R system' which records both activity and rumination time of individual animals. It has been noticed, from observing the rumination time, that fresh calvers, which are developing a problem, 'cope' for the first four days post-calving and then suddenly reach a 'breaking point', when the rumination time reduces to half, compared with the previous four days. Examination of these cows reveals some have an elevated temperature and many have a foetid metritis.

Careful observation of individuals in the fresh group, including milk yields, followed by clinical examinations of 'suspect' cows will provide early diagnosis of problems; rectal temperature is only a guide to a cow's health.

The use of 3rd and 4th generation cephalosporins in veterinary practice has received much comment and their future use may well be restricted. We have a metritis problem on one farm where we believe the feeding of the transition cow is satisfactory and our protocol for the future is to use antibiotic uterine pessaries (Bovocycline) for all assisted calving and retained foetal membranes.

If we endeavour to maximise rumen function, reduce stress, treat cows as individuals, examine if we have any suspicions and treat promptly, always looking after the cow, the cow will then look after us.

TIM O'SULLIVAN, MACPHERSON O'SULLIVAN

The value of ewes, and the lambs they produce, has improved dramatically over the last couple of years. In good years as in bad, the key to successful flock performance is to achieve a good crop of lambs and to minimise losses. **Working with your vet at a pre-lambing visit can help avoid the most common pitfalls.**

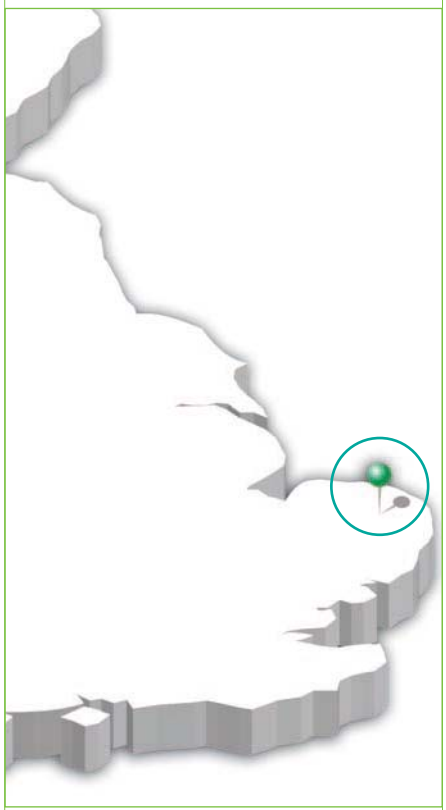
Ewe Nutrition for Lambing

Managing the condition of ewes correctly during pregnancy will have a major impact on losses around lambing time both in ewes and their lambs. Poor nutrition prior to lambing will lead to weak lambs, poor colostrum and milk production and losses due to twin lamb and other ewe diseases. Regular body condition scoring throughout pregnancy is vital to assess how well your ewes are having their nutritional requirements met. If you are unsure how to condition score, ask your vet to teach you!

In sheep, the lamb becomes attached to the womb at about 35 days and from there up until about the 12th week of pregnancy the lambs are relatively small and ewes can obtain enough energy from reasonable grazing to maintain pregnancy. Beyond this, additional feed will be required for thin ewes and ewes carrying multiples.

It is important therefore to scan and body condition score your ewes around the 70 - 90 day in-lamb mark so that you can identify barrens, singles and multiples for later management. Scanning may also pick up ewes that are going to lamb at the end of the lambing period. Depending on numbers, they can either be managed separately or kept with the singles for longer.

Obviously, if feed is scarce it makes sense to cull barrens and split your flock so that your multiples can be treated preferentially. In later pregnancy, ewes carrying multiples may be unable to eat enough to maintain their lambs and themselves and will draw on body reserves. If these reserves are not available then twin lamb disease and other metabolic conditions may follow.



Veterinary Surgeon	Tim O'Sullivan
XLVets Practice	MacPherson O'Sullivan

Supplementary feeds

Forages

In severe winters, where no grazed grass is available, then ewes in mid pregnancy will require 3-4 kg of a good quality silage (or 1-1.5 kg hay) per head per day to maintain body condition. Silage and hay can vary hugely in quality so ideally have it analysed to avoid over or underfeeding. A good quality silage will have a dry matter of 25% plus and a D-value of more than 65, but protein values can be as high as 22% or as low as 8% so the protein requirement will obviously vary significantly. Knowing what your forage contains allows you to pitch your concentrate levels correctly.

Concentrates

Ideally formulate your feed to complement your forage. If you are home mixing, use a good quality protein source and use rolled rather than whole grains to avoid grain being passed undigested. A simple 2 parts barley with one part beet pulp and 1 part soya with some molasses and minerals will produce an 18% protein mix that will be digestible and of good quality. If you are buying a compound in then check the ingredients before ordering. Two 18% rations may be of completely different energy values. Avoid compounds containing a lot of feed by products such as cocoa and citrus pulp, if you don't recognise it, it is probably of low quality! Ingredients are listed in order of percentage inclusion, which will give you an indication of how the compound is likely to perform. Aim to have an energy density of no lower than 12MJ/kg and ideally higher than the ME of the forage.

How much concentrate to feed?

Again this will come down to the quality of forage, the nature of concentrate available and the number of lambs expected. For example, on reasonable quality big bale silage, start feeding twin bearers 250g per head 4 - 6 weeks prior to lambing and increase by 100g -150g per head per week up until lambing. Triples will need to be fed two weeks sooner; singles in good condition can start 2 weeks later. Make sure you have adequate trough space (at least 18 inches per head) to avoid bullying.

Once lambing has begun don't forget that the ewe's milk production doesn't peak for 3-6 weeks and ewes should continue to be fed for this time or until grass growth produces pasture of at least 4 inches of grass cover.

Minerals

Deficiencies of vitamin E and selenium can cause lambs to have poor vigour so adequate levels of trace elements are important. Don't assume that ewes will take what they need from mineral licks, as consumption of these will vary massively.

Blood Sampling

This can be used to assess the energy status of your ewes in the run up to lambing. High levels of butyrate can indicate weight loss and risk of twin lamb disease. Trace element levels can also be checked to avoid deficiencies or unnecessary supplements. Plan to have samples taken early enough to spot problems before they happen rather than to find out why things went wrong.

The sooner you get your vet involved the better advice he can give you and the more time you have to make it pay!

Many XLVets practices run lambing or pre-lambing FarmSkills workshops. These are a great opportunity to learn more about how to body condition score ewes and feed them accordingly. Contact your local XLVet practice or the FarmSkills office for more details.

More detailed feeding information can be found at:

www.defra.gov.uk/foodfarm/farmanimal/welfare/advice/documents/ewenutri.pdf

www.sac.ac.uk/mainrep/pdfs/yearroundfeed.pdf

Sophie Throup FarmSkills Manager

FarmSkills

GROWING FARM BUSINESS SUCCESS

FarmSkills training is reaching out to a wide audience across the country, becoming part of many herd health plans and staff development on farm. We look at a number of recent workshops which have had local impact. Many of our workshops are partly funded with RDPE support from DEFRA and the EU which helps lower the cost of the overall workshop to farmers.

The Next Steps...

FARMSKILLS NORTH EAST

Jo Bates Scott Mitchell Associates

The most recent FarmSkills training workshop at Scott Mitchell Associates was entitled 'Beef Basics'. It was aimed at younger members of the farming community and those farmers wanting to review their skills; ultimately a mixture of delegates attended - three farmers' sons, two more experienced farmers, a farmer's girlfriend and a farming apprentice. We covered the legal aspects and theory of disbudding/dehorning, castration of calves and injection techniques for intramuscular, intravenous and sub-cutaneous injections. The practical aspects of the course involved disbudding six calves and consideration of the appropriate method of castrating the bull calves.

We also visited Hexham Auction Mart and estimated the weight of approximately fifteen cull cows and fat cattle that were being sold that day - discovering their exact weights when they were sold. All delegates except one underestimated the weight of the adult cows by 100kg+. It was a valuable exercise in understanding the inaccuracy of weight estimation and we went on to discuss the implications of this with regard to medicine dosage.

All feedback that we had from the day has been very positive; one delegate commented that **'the course was fantastic!'** It was refreshing to have a number of younger farmers in the audience with their associated enthusiasm - it seems we have also created some discussion on-farm when they have gone back home and explained correct techniques to their fathers. All-in-all a good day was had by both trainees and trainers.

FARMSKILLS EAST MIDLANDS

Rose Jackson Scarsdale Vets

Having run our herdsman certificate course of four basic modules twice now (mastitis control, dairy nutrition, fertility and obstetrics and calf rearing from birth to weaning) we decided to develop a series of 'advanced' modules aimed at people who had already completed the first course. To get a feel of what subjects might interest our clients, I sent out a questionnaire with a list of 12 subjects to previous FarmSkills attendees. The most popular ones were heifer rearing part two (from weaning to first calving), protecting the freshly calved cow and dairy genetics. Following the previous model, clients could attend either single workshops, or all three for a discounted rate.

The genetics course was one that I thought might be particularly helpful for our clients as it is a subject that is surrounded by much 'myth and magic'. I wanted farmers to be able to decipher all the jargon that is thrown about by the semen companies, so that they felt able to make decisions on choosing bulls that would be best suited for their herd.

First of all, I came up with the following objectives:

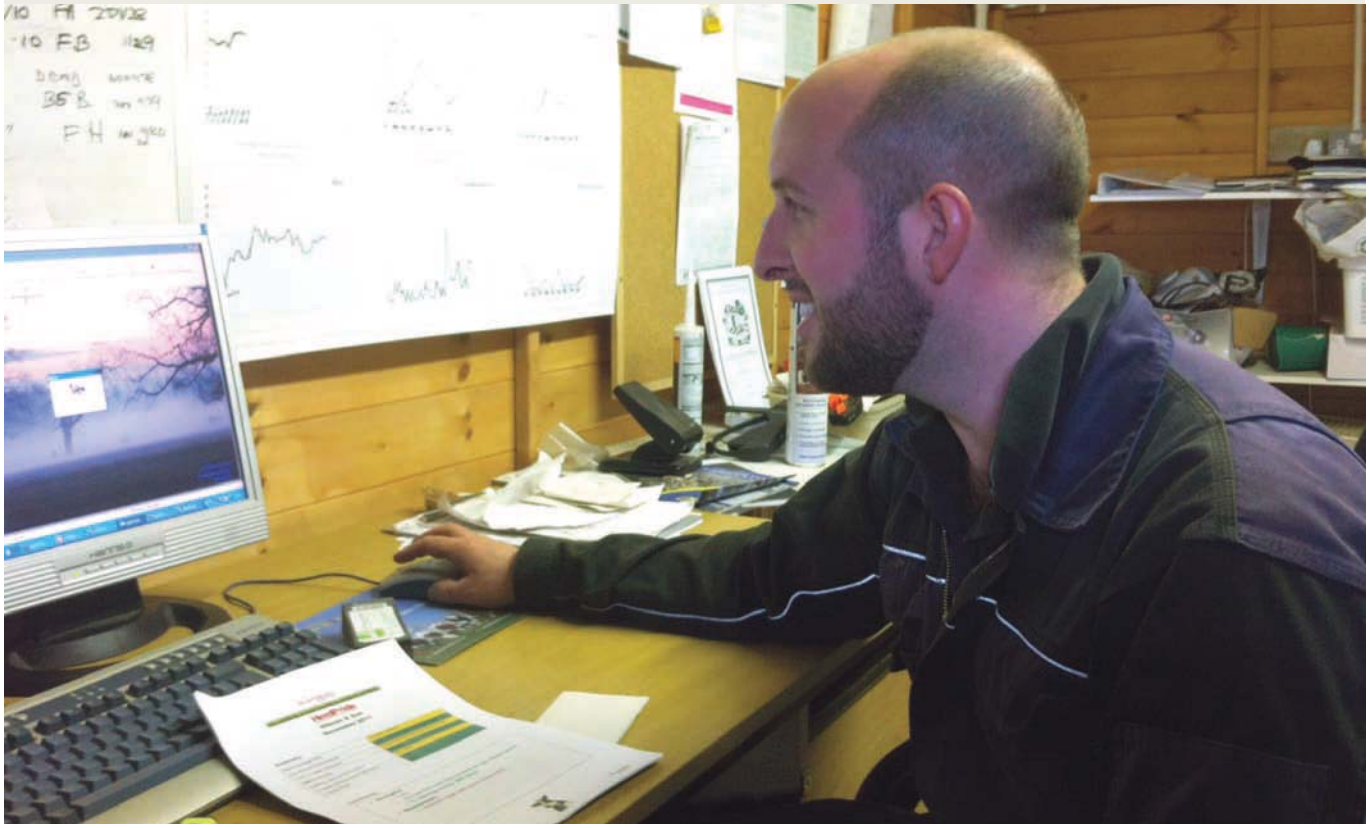
- Define Genetic index and describe how genetic index can be calculated.
- List traits that might be included in a genetic index and rank them in order of importance for your own farm.
- Define £PLI and describe how the emphasis on fertility and fitness traits has changed since the old PIN system.
- Understand how the reliability of genetic index can be assessed and how this can vary between different indices.
- Understand all the relevant parts of a bull proof as set out by Holstein UK and rank a selection of bulls in order of £PLI.

I enlisted the help of an external speaker, Mike Coffey of the SAC, for the morning theoretical session. He explained some basic genetic terminology and concepts and how the current UK genetic index was developed. He also demonstrated that genetic improvement is 'permanent, cumulative over generations and is cost effective' using examples from research. Mr Coffey stressed that genetics is only part of the equation and that environment still plays a very important part in an animal's performance.

I led the afternoon session which mostly involved discussion and round the table farmer interaction. I started by explaining all the parts of a bull proof using real examples. Farmers then listed traits that they wanted to try to improve on their farms and then ranked them in order of importance. I then split them into two groups and using hypothetical farm scenarios (one mastitis and one fertility), got them to choose three bulls that they could use to try to improve these situations using a selection of bulls from Holstein UK. Other subjects that came up in the afternoon discussion included cross-breeding, genomics and the use of sexed semen.

One of my clients, Andrew Gilman (pictured below), found the course particularly useful. The subject got his attention because he had always seen genetics as a 'different language' and felt that, because his isn't a pedigree herd, it is a bit of a closed door to him. Coming on the course has meant that he now makes the primary decision about buying semen, rather than being sold it. Andrew's main breeding objective was to select bulls for high fertility so he now makes a list of bulls with the highest £PLI that he can afford and then chooses the bulls with the best fertility index out of these. Andrew does his own AI so this extra involvement will make it even more rewarding when he gets the heifers down on the ground.

I find it very rewarding running these courses, especially when I get feedback like that. I think it provides another great example of FarmSkills working in practice. I would like to try to keep the momentum going and am currently planning our next series of modules for 2012.



FARMSKILLS NORTH WEST

Kath Aplin Paragon Vets

We held a one day foot trimming course, with funding assistance from the Cumbria Rural Skills Programme. The course was aimed at people who had done a foot trimming course in the past, to review trimming technique, and improve lameness control. Five people attended - two had been on a course about a year before but hadn't trimmed many feet, so wanted to re-build confidence. The other three had a lot of foot trimming experience, but wanted to ensure they were still doing things right.

The majority of the day was spent trimming feet. After a quick review of the five steps, four people were set to work trimming - two cows in crushes, each with a front and back leg lifted. The fifth person was able to observe the others trimming, and discuss foot shape and trimming technique with the other trainees and instructors. We had two instructors for this course - me the vet, and Tony Richardson - foot trimmer and NACFT instructor. There were plenty of feet for everyone to practise on, including straightforward trims and feet with a variety of lesions. Each foot generated some discussion and the opportunity to learn.

After lunch, a quick quiz on lameness lesions led on to a look around the farm for environmental factors that might increase or reduce the risk of different types of lameness. The recent improvements that had been made to the host farm provided a great opportunity to see what can be done to prevent lameness.

At the end of the course, everyone was able to identify at least one thing they would now do differently on their own cows to trim feet and treat lame cows more effectively than before the course - a day well spent.

Find out more...

So whether accredited through industry, or followed through the FarmSkills programmes of learning in the dairy, beef and sheep sectors, FarmSkills training is practical, hands on and delivers a business benefit to each farmer who attends. For more information about training available in your area, why not log on to our FarmSkills website;

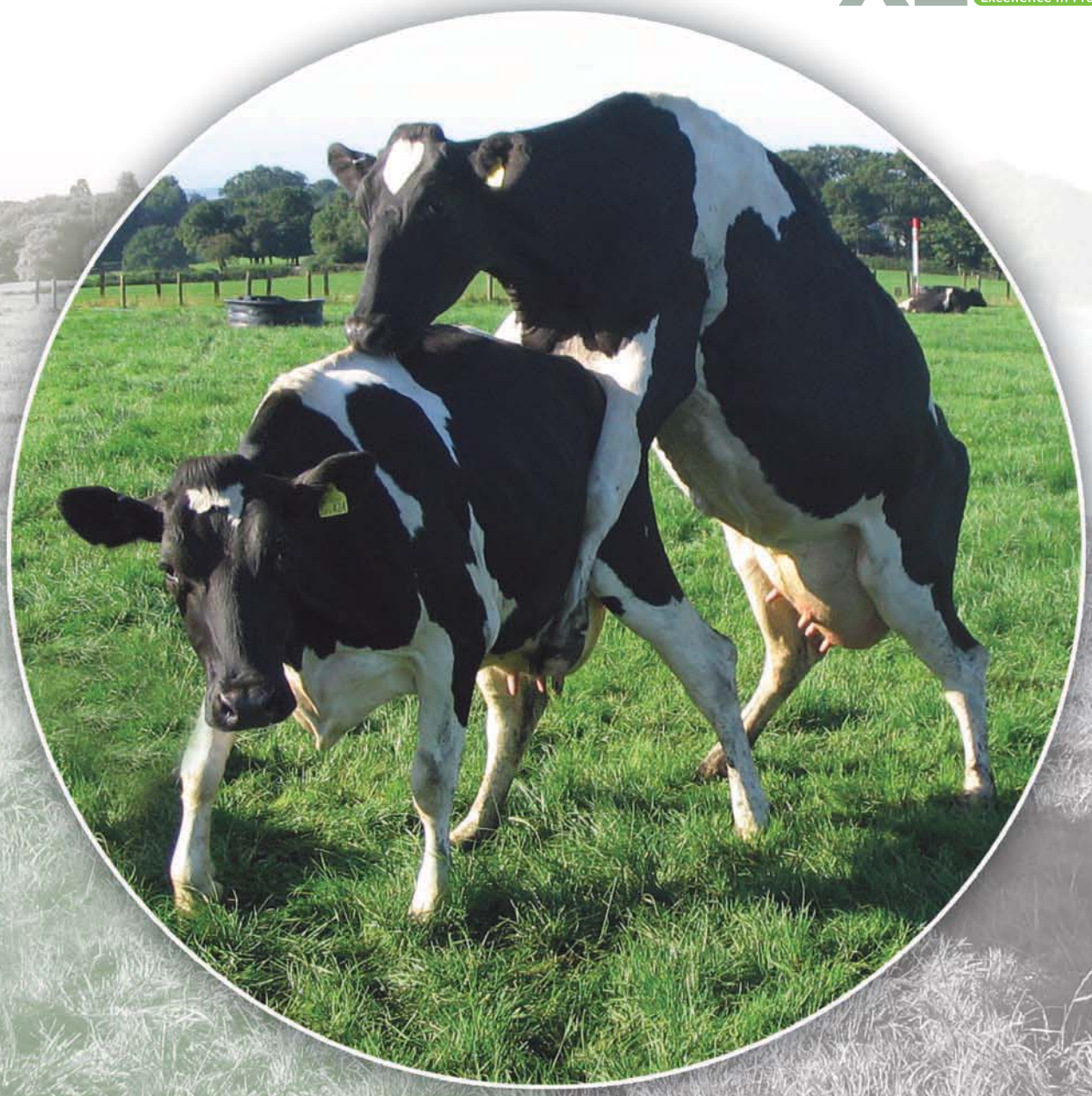
www.farm-skills.co.uk

or call us on **01765 608489**

FarmSkills, Mill Farm, Studley Road, Ripon HG4 2QR

PRACTICAL GUIDE

xLvets
Excellence in Practice



HEAT DETECTION IN DAIRY COWS

Heat detection is crucial to the productivity and profitability of all herds especially those relying entirely on artificial insemination (AI). Poor or inaccurate heat detection leads to wastage of semen, risk of infection, and abortion if pregnant cows are inseminated.

FarmSkills
GROWING FARM BUSINESS SUCCESS

PRACTICAL GUIDE

Heat Detection in Dairy Cows

Increases in herd size and the decrease in availability of farm labour have led to a reduction in heat detection rates and accuracy.

Signs of oestrus behaviour vary greatly between cattle and can differ in the intensity of expression. Some cattle display marked signs of heat with others being more subtle and therefore difficult to observe. Heifers tend to demonstrate oestrus behaviour more strongly than cows.

Signs to observe may include:

- Mounting other cows is sometimes observed either just before or just after oestrus
- Restless or aggressive behaviour
- Reduced appetite, rumination and milk yield
- 'Fleshman lip curl' - cows curl their upper lip when detecting the pheromones of other cattle
- Standing to be mounted by other cows
- Clear, elastic mucus discharge from the vulva, which may be seen sticking to tail and flank
- Slight elevation of the tail head
- Ruffling of the hair on the tail head and rear
- Rubbed areas of skin around tail head (see Figure 1)

Figure 1

- Soiling with dirt or mud around rear, and on the flanks
- Bellowing
- Wandering away from the main herd
- Vulva appears red and swollen
- Rise in body temperature
- Chin resting (see Figure 3)

Remember...

...that not all of the signs will be seen in all cattle. The only definitive indicator of oestrus is a cow standing to be mounted by another cow.

When to observe oestrus behaviour

Accurate heat detection requires regular observation of cows for signs of oestrus behaviour. Cows should be observed for a minimum of 3 times a day, and at least 20 - 30 minutes each time.

Ideal times for heat detection:

- Before collection for morning milking
- Mid-morning
- Before collection for evening milking
- Late evening - bulling activity is frequent at this time

Figure 2

Accuracy of heat detection can be improved by the utilisation of heat detection aids such as tail paint (Figure 2), milk progesterone assays, heat mount detectors and activity monitors including pedometers and neck collars.

Good heat detection also depends upon numerous other factors:

- Cows willing to mount and be mounted, i.e. a sexually active group in the herd
- Suitable housing conditions - good light and non-slippery flooring
- Healthy cows - free from disease, lameness and in good body condition

Figure 3

FarmSkills
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FarmSkills
Mill Farm, Studley Road, Ripon,
Yorkshire HG4 2QR
T: (01765) 608489 E: farmskills@xlvets.co.uk
www.farm-skills.co.uk

Improving knowledge and skills in this type of area is just the sort of thing that the XLVets' FarmSkills initiative is designed to achieve. FarmSkills training is hands-on, interactive, and led by trained facilitators who are vets or experts in their subject.

Heifer Calf Rearer of the Year winners

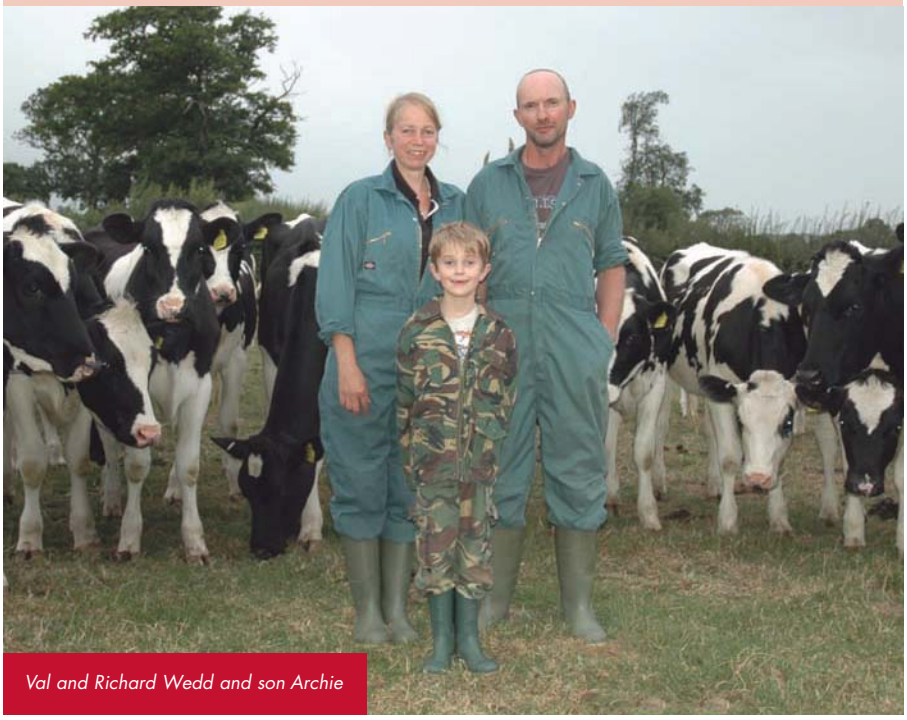
Staffordshire dairy farmers Richard and Val Wedd are winners of the Heifer Calf Rearer of the Year competition sponsored by Volac and supported by XLVets and farming publication, British Dairying. The Wedds were nominated for the competition by their vet Rose Jackson of XLVets' Scarsdale Vet Group.

Scarsdale Veterinary Group

Veterinary Surgeon	Rose Jackson
XLVets Practice	Scarsdale Veterinary Group

Richard and Val farm in partnership with Richard's parents, Tom and Janet, at Piltons Farm, near Burton on Trent. They are currently expanding their closed herd from 100 to 150 milking cows, and so they need as many heifer replacements as possible. The Wedds have focused on their heifer rearing management for two reasons; numerical and financial. They're also working on reducing days to first calving; currently only two thirds of the heifer crop is calving at 24 months.

'The sooner we can get their milk in the tank, the faster we'll make a return on investment,' Richard explains.



Val and Richard Wedd and son Archie

FarmSkills training course

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DAIRY

To bring a sharper strategic focus to their rearing practices, the couple attended two one-day XLVets FarmSkills calf rearing courses run by Scarsdale Vet Group. The first course focused on the period from birth to weaning and outlined best practice for colostrum management and prevention of calf scour. The second course covered the period from weaning to first calving. It focused largely on feeding calves and monitoring growth rates to achieve target weights at first service and enable heifers to be calved down at 24 months.

Rose explains: 'Our FarmSkills courses are run as practical workshops for small groups of people, ensuring the maximum benefit for everyone who attends. They are part of a nationwide programme - so the same courses are also available in other parts of the country, organised by other XLVets practices.

'Increasingly farm assurance schemes expect farmers to demonstrate they have undertaken some training and improved their expertise. A course certificate is always given to attendees who complete a FarmSkills course, as a record to go in their herd health plan. In some areas, like here in the Midlands, various funding sources are also available which make these courses even more affordable.'

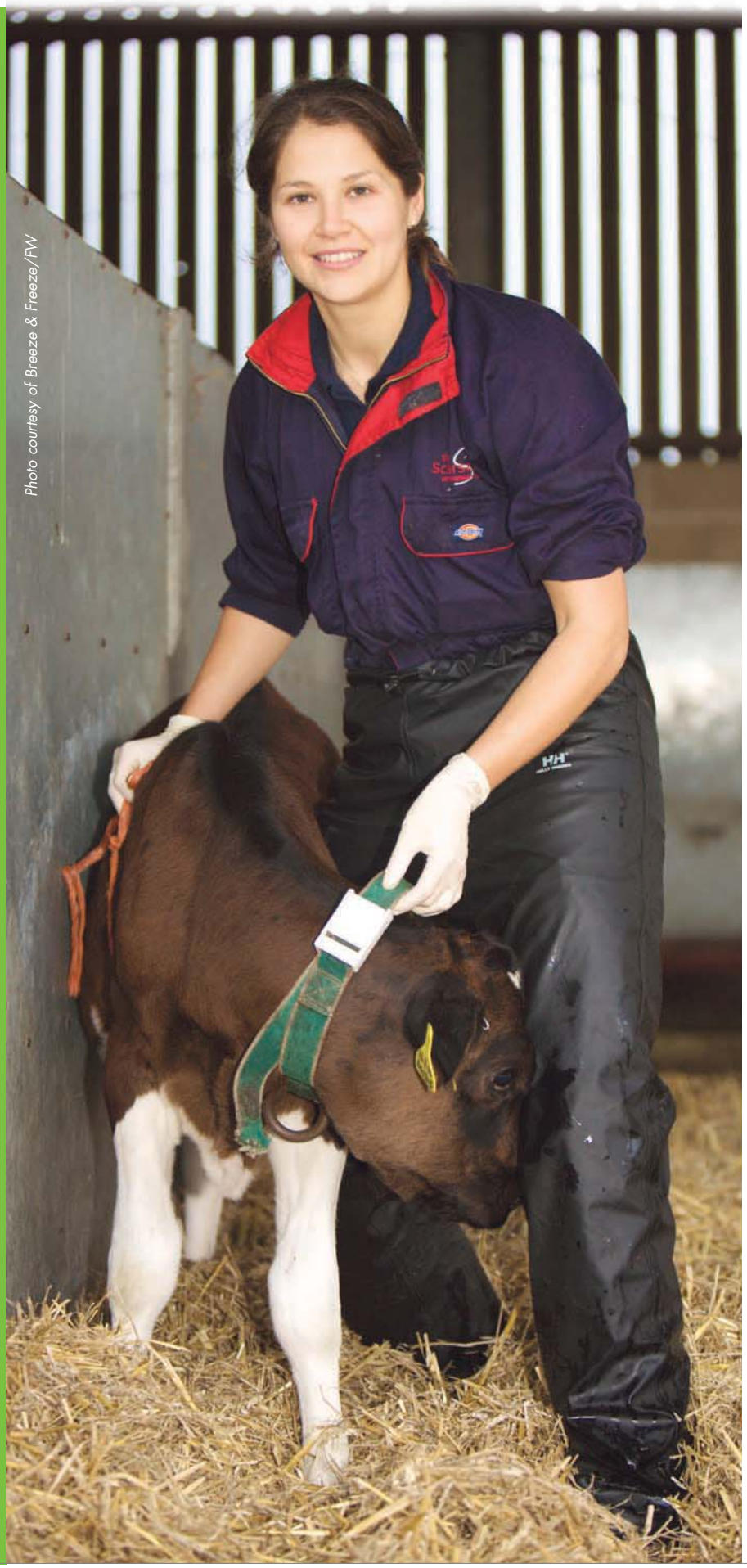


Photo courtesy of Breeze & Freeze/FW

Calf rearing at Piltons Farm is under the primary care of Val Wedd. She adds: 'Richard and I were keen to improve our calf management and were encouraged by Rose to attend the FarmSkills courses. As a consequence, we made quite a few changes which together are helping us achieve our goals and achieve a more uniform crop of well grown heifers.

'For instance, we had always fed colostrum for the first four days, but now, in addition, we use a colostrometer to check its quality.

'Following the course, we made the decision to stop feeding waste milk and instead calves are now fed a specialist whey based calf milk replacer which is high in protein - 26% - and low in oil, and specifically developed for modern dairy cows.

'We now use a thermometer to check the water is at 39°C pre-mixing for every feed, and always ensure we mix the milk thoroughly. We've noticed that nutritional scours have been significantly reduced as a consequence.'

Rose adds: 'Consistency is key when it comes to feeding calves - the concentration, temperature and timing of feeds needs to be spot-on, and this is very difficult to achieve when feeding waste milk.'

The Wedds aim to grow calves as fast as possible for the first five months while feed conversion rate is at its greatest. The target weights to achieve are 76kg at weaning when calves are seven to eight weeks of age, 300kg at nine months and 350kg - 380kg at first service from 13 months.

Val explains: 'On the FarmSkills course, we learnt how we could use a weighband to check individual calf growth rates. This method informs me when to wean, regardless of age.

'In particular, I find it useful for identifying any slower growing calves that used to get lost in the system. These can now be allowed another week or so before being weaned, and it's helped improve the consistency of the groups.

'As a minimum we now weigh the heifers every time they go through the race. This extra attention to detail is certainly helping us to achieve our new targets which we trust will be maintained through to first calving.'

Rose says: 'Ideally, heifers should be weighed every two months to ensure they are achieving the correct daily growth rate. As a minimum, calves should be weighed at birth, 6 months and 15 months.'

Table 1 (opposite) sets out some recommended targets for calf performance.

(left) Scarsdale vet Paula Scales shows how to use a weighband to check calf growth, during one of the FarmSkills courses on calf rearing run by the practice.

Table 1: Calf performance targets

Parameter	Target
Mortality from birth-weaning	<5%
Mortality from weaning to 24 months	<5%
Mortality at calving (including culling for infertility)	<5%
Growth rate from 0-6months	0.7kg/day
Growth rate from 6-24months	0.8kg/day
Target weight at 6 months	180kg
Target weight at 15 months	420kg
Target weight at 24 months	630kg

Brickell *et al.*, 2009 Animal 3:8 1175-82

Preventing disease

The Wedds receive regular fortnightly visits from Rose Jackson to check cow fertility. She also takes a whole herd approach to health and advises on disease control and prevention. For instance, a whole herd vaccination strategy for BVD has been in place for a number of years.

For the Wedds' youngstock, Rose has put together a vaccination and control programme to protect against pneumonia. Calves are dosed intra-nasally with a pneumonia vaccine at 7 days of age and at 12 and 15 weeks of age, they are then given a multi-valent pneumonia vaccine which includes a BVD vaccine.

Rose explains: 'Giving youngstock the best possible start in life does pay dividends. They are the future of the herd, and their growth rates in the first six weeks will impact on the age at first calving and subsequent milk yields.

'I am incredibly proud that Richard and Val have won this award. They work hard to manage their calves well and pay attention to the detail. Their heifers always look good and they have excellent heifer fertility.

'The FarmSkills workshops have given them some extra knowledge and expertise to further improve the good job that they were already doing, and helped put them ahead of the other competition entrants.'

Rose Jackson (left) celebrates with Richard and Val Wedd, after they win the Volac Heifer Calf Rearer of the Year award.

Many FarmSkills courses are supported by RDPE funding with grants from LANTRA LandSkills, which help lower the overall cost of attending a course, which is of great benefit to many of our farmers.

KEITH CUTLER, ENDELL VETERINARY GROUP

Is Johne's disease in your herd?

If you don't know the Johne's disease status of your dairy or beef herd, then you need to ask your vet to investigate for you. If it is present, then control strategies need to be adopted to protect future herd performance and health. Whatever the case, biosecurity controls to protect against it are also required, along with ongoing screening for the disease.

That's the message from Endell Veterinary Group's Keith Cutler, a member of the National Johne's Disease Action Group, and a director of CHeCS (Cattle Health Certification Standards Board). Keith is concerned that the financial impact of this particular infectious disease, and its long term effects in the herd, are not being fully recognised by farmers.

Keith explains: 'Johne's disease can remain undetected in herds for many years, as there is a long incubation period between infection and clinical signs being seen. However, it's thought that at least one third of dairy herds are infected with the disease. It's also present in beef herds.'

Signs of Johne's disease

The cause of Johne's disease - mycobacterium avium subspecies paratuberculosis (Map) - can infect many species, particularly ruminants. Infection, over time, creates an inflamed intestinal (or gut) wall. This effect is gradual, chronic, and irreversible.

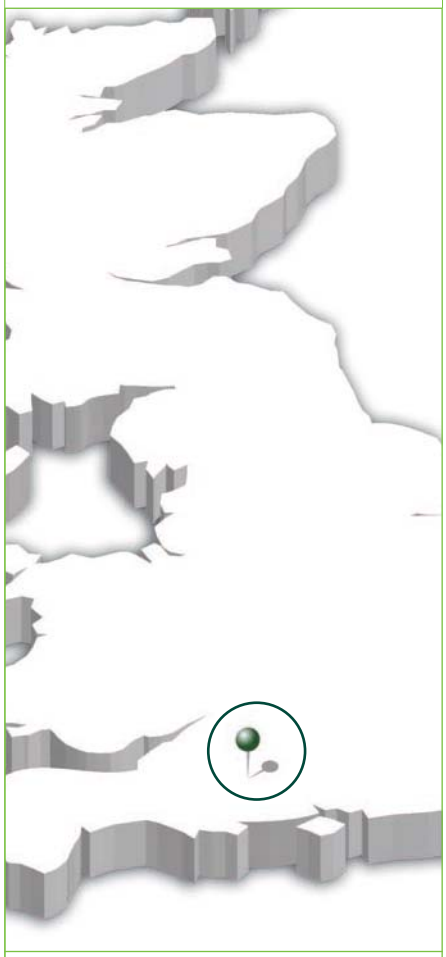
So the classic signs of clinical Johne's disease are weight loss and scouring, as the gut wall becomes less able to absorb nutrients and fluid. However, these signs are not usually seen until the animal is between two and six years of age.

Infection usually occurs early in life; young calves within the first days and weeks of birth are the most susceptible. Transmission is usually faeco-oral, but can also occur via colostrum or milk from infected cows.

Because the bacterium's effect on the gut is gradual, then for some time before clinical signs are seen, there will have been a negative impact on cow fertility and milk yields in infected animals. These animals are also likely to have a higher incidence of many other diseases, lameness for example, than uninfected herd contemporaries.

Keith explains: 'Herds, in which Johne's disease is present, will usually have higher culling rates. But the possibility of the disease being the cause is often overlooked. A farm might cull a few cows each year because they are always a 'bit loose' and never seem to put on any condition - but actually these animals could be infected with Johne's disease. And they will have been spreading the infection around the farm.

'So it's essential for all dairy and beef farmers to establish whether Johne's disease is present on the farm or not. Admittedly, this takes time and effort and does cost money. But ignoring the possibility of infection can cost more money, as the disease can spread and levels escalate within a herd until the magnitude of the problem makes it difficult to address.'



Veterinary Surgeon	Keith Cutler
XLVets Practice	Endell Veterinary Group

Testing for Johne's disease

Keith explains: 'Unlike other infectious diseases - BVD, IBR, etc - the aim with Johne's disease is, initially, simply to establish whether it is present or not.'

A variety of laboratory tests are available to test for Johne's disease, and on dairy farms, whole herd antibody screening can easily be carried out on milk samples. Animals suspected of being clinically affected should be tested as a priority.

'The nature of the disease means that evidence of the bacterium is not always present in infected animals, all of the time,' explains Keith. 'Hence ongoing testing is important. Targeted routine screening should be carried out and include animals which are not performing to their potential, and any cull animals.'

The risk factors which increase the likelihood of Johne's disease being present are shown in Table 1.

Table 1: Risk factors for Johne's disease

- Intensively managed herds
- History of bought-in animals
- Communal calving yards
- Feeding pooled colostrum to calves
- Contracting out heifer rearing
- Spreading of slurry/FYM from other farms

Disease control strategies

If the presence of Johne's disease is confirmed in a herd, then a control programme needs to be put in place to prevent the infection spreading.

'Repeated testing of adult animals can identify individuals which are likely to be infected allowing them to be managed differently to reduce the threat they pose to other animals, particularly young calves, on the farm.

'Ideally, all infected or suspect animals will be culled before signs of clinical disease are seen so that they are not spreading the infection into the farm environment. However, in the early stages of a control programme, there may be too many high risk animals to make culling them all an economic option.

'So where the number of infected cattle is high, then high risk cows should be calved separately from the herd,' see Table 2.

Table 2: Action plan for high risk Johne's disease cows

- Calve cows in isolation from others
- Clean and disinfect pens between use
- Clean cows' teats before calving
- Feed colostrum only to their calf
- Do not feed waste milk to other calves
- Consider pasteurisation of colostrum

Weight loss and scouring are the classic signs of clinical Johne's disease but there is also reduced productivity in the pre-clinical phase.

Cattle can become infected with Johne's disease at any age, although infection in the first few weeks or months of life is most common.

'Feeding a good quality milk replacer rather than pooled colostrum and waste milk will further reduce the risk of transmission. In heavily infected herds, then 'snatch calving' reduces the risk of newborn calves being infected by their dam - they can either be given powdered colostrum or colostrum from known donor cows of high health status.

'The calf is most vulnerable to infection in its early life. So once in the rearing accommodation, it is vital to maintain good hygiene to reduce the level of challenge as much as possible.

'Calves should also be kept away from the faeces of older animals. Ideally, when calves are turned out in the summer, they should not be grazed on land onto which slurry or dung from older animals has been spread.'

Biosecurity protocols

Whether Johne's disease is present or not, biosecurity protocols should be instigated to protect the herd.

'Due to the long incubation period of the disease, buying-in policies should give preference to animals bred and reared in herds which have an active Johne's disease surveillance and management policy. The longer such a surveillance and management policy has been followed, the better.'

Know your herd's Johne's disease status

Keith concludes: 'In the case of Johne's disease, ignorance, most definitely, is not bliss. Determining whether your herd is infected requires a different tack to testing for BVD or leptospirosis. Farmers should talk to their vet about investigating the herd's Johne's disease status, if it is not known. If the disease is confirmed, then they can advise a control strategy to reduce the spread of infection and limit production losses.

'If the herd tests free of the disease, then biosecurity protocols to safeguard the herd from future infection will be needed along with an ongoing screening programme.'

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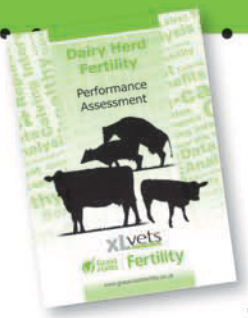

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