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WINTER EDITION 2010

Livestock MATTERS

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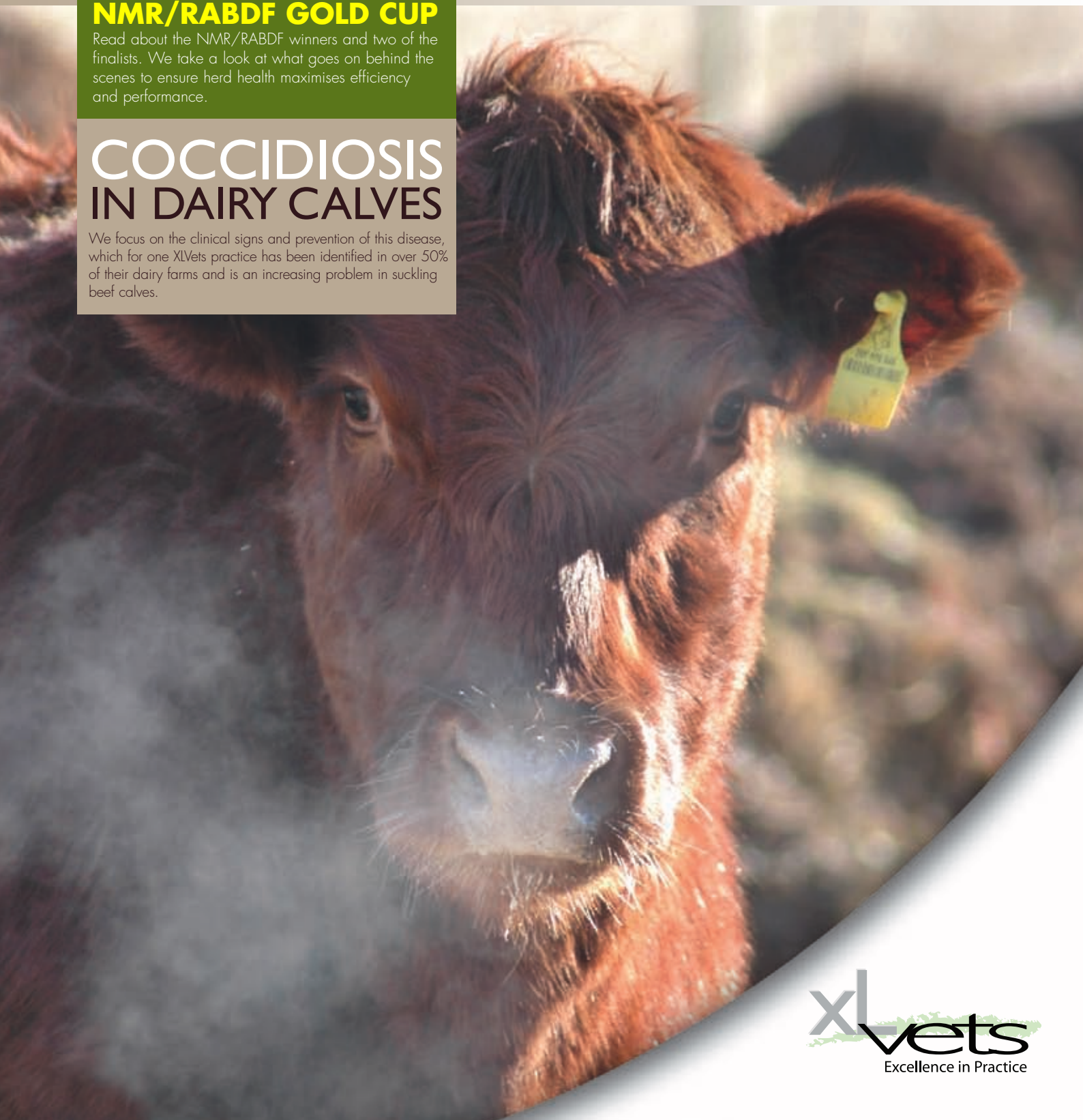

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THE EDITOR

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

As winter is now upon us, in this issue we take a look at the management and feeding of young calves during the cold weather and provide some simple steps that can help your young calves thrive during the cold winter months. We also have a guide to assist those of you starting to prepare for lambing time, which seems to be fast approaching.

This issue also celebrates the recent successes of XLVets members and their farm clients. We have a round-up from the NMR Gold Cup, featuring the winner and two finalists; looking at how they work in partnership with their XLVets practice. We also have a report from the Farmers Weekly Awards and the Volac Heifer Rearer of the Year Award.

FarmSkills provides us with advice and tips for DIY AI - which has proved one of the most popular FarmSkills courses during 2010 and the pull-out guide provides a best practice guide to footbathing for cattle.

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

Joanne Dodgson XLVets

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Dairy Event & Livestock Show 2010

On **7th and 8th September**, XLVets attended the Dairy Event and Livestock Show. For the first time, the event was held at the NEC in Birmingham - a new venue to represent the changing and progressive nature of UK agriculture. The event was a fantastic success - 16,000 farmers attended the show, a rise of 10% on the previous year.

As part of the FarmSkills training programme for farmers, visitors to the XLVets stand were offered the opportunity to learn a new skill by taking part in one of the 'mini-bite' FarmSkills challenges, each led by vets from the XLVets member practices. The three challenges comprised; the correct procedure for tubing an udder with a teat sealant, determining colostrum quality and importance of feeding good quality colostrum to calves and safe injection techniques using the Sterimatic system. For everyone who completed a challenge there was a free XLVets FarmSkills t-shirt or cool bag - and the chance to win a day's training with FarmSkills.

XLVets was also represented in the Farm Health Planning lectures, where Kat Bazeley (Synergy), Richard Knight (Westmorland), Chris Price (Drove) and Phil Alcock (Bishopton) each delivered a short seminar on youngstock health.

The XLVets FarmSkills stand at this year's Dairy Event was a huge success, this was confirmed with the stand being awarded the coveted Prince Philip Award - an award presented for the most practical, relevant and best-presented technical demonstration/exhibit at the Dairy Event.

A huge **thank you** must go to the many XLVets members who helped out on the stand over the two days and helped make the stand such a success and extremely popular with the visitors attending the event.

XLVets FarmSkills wins Prince Philip Award

The Heifer Calf Rearer of the Year Award 2010

To raise the awareness of good practice in calf rearing management, Volac launched its first ever Heifer Calf Rearer of the Year Award, supported by XLVets and British Dairying.

Open to all farmers rearing heifer replacement calves throughout Britain, the award received overwhelming interest and support. The initial entries were screened and the shortlist was judged by an XLVets vet and one of Volac's regional business managers. Philip Metcalfe was announced the winner of this year's award at the Dairy Event & Livestock Show in September.

Philip manages a 550 cow herd in partnership with his family at Washfold Farm, Leyburn, North Yorkshire. The Metcalfe family's 1,400 hill acres are spread over three units. They have adopted a high input, high output strategy with the herd housed throughout lactation and currently averaging 9,800 litres.

What the judges liked:

- Large scale unit without compromising health or welfare combined with intense attention to detail
- Huge awareness of the system's limitations
- Priorities include staff motivation
- Willingness to share knowledge and experience with other farmers

Volac's Maggie Gould praised Philip's all round attention to detail, 'Philip is managing a large scale unit without compromising health or welfare combined with intense attention to detail,' said Maggie. 'He has a huge awareness of the system's limitations, his priorities include staff motivation and we admired his willingness to share knowledge and experience with other farmers.'

Philip believes in managing a 'hassle free' dairy unit. 'We're prepared to consider investing in new equipment or adopting a new system if it can save us hassle and money and contribute to improved performance,' he says.

That approach is reflected in their calf unit which utilises a simple traditional building with individual pens for the first week before the calves move on to a purpose built shed featuring all-in, all-out pens, each accommodating 15 head and a computerised feeding system. Philip has calculated the unit's current variable costs to rear a heifer replacement to point of calving to stand at an average £610.

'Maximizing calf potential is equally important to me as cow management. A good start is essential because we target calving at 24 months and 96% achieve that date, we also aim for them living a healthy life accompanied by a long profitable lifetime production. In fact one of our priorities for the future is to determine the impact of calf diet - milk replacer type and volume together with forage types - on lifetime fertility and longevity. We're also going to look at the impact of infectious diseases, such as Neospora, specifically on heifer fertility.'

'Each calf is stomach tubed within the first six hours with four litres of frozen pooled colostrum from cows tested negative for Johne's and periodically for plasma Ig levels, after which we feed to grow them as fast as possible, whole milk for the first week, before moving on to replacer, so that by weaning they have reached 90kg target weight.'

All calves are routinely vaccinated against major disease, however the Metcalfes have recently adopted a new herd health plan which features more active disease monitoring and control and also weighing the calves at various stages.

Calves feature among Philip's improvement plans; extending the accommodation is on the cards to enable 100% all in, all out, together with integrated maternity facilities with rubber matting and underfloor heating and, for downer cows, specialist hydro-facilities.

XLVets judge David Black commented, 'I was struck by Philip's detailed understanding of the effects of disease on health, welfare and productivity and his pragmatic approach to preventative health strategies. As part of this, he has developed a defined working partnership with his vets, utilising agreed standard treatment protocols, which is commendable and very effective.'

For details of the 2011 Heifer Calf Rearer of the Year Award visit **www.xlvets.co.uk**

Pictured below from left to right: Maggie Gould, Mike Rogers (Volac), David Black (XLVets), Mike Green (British Dairying) and Philip Metcalfe.

Farmers Weekly Awards 2010

Congratulations to XLVets member Mark Burnell from Synergy Farm Health who won the award 'Livestock Adviser of the Year' at this year's Farmers Weekly Awards. Mark won the award based on his enthusiasm for his job, having a defined strategy for the future, his ability to bring all the team together and achieving buy-in for the importance of training.

Congratulations also to the three XLVets members' clients who won awards on the night; John Hoskin for winning 'Beef Farmer of the Year' and 'Farmers Weekly Farmer of the Year'; the award for the overall winner, and Neil Baker for winning 'Dairy Farmer of the Year', both are clients of Synergy Farm Health and to Andrew Rees, client of Rutland Veterinary Practice for winning 'Young Farmer of the Year'.

There's a feature on winner Neil Baker on page 11, who was also a finalist in the NMR Gold Cup this year. In the next issue of Livestock Matters we'll be catching up with the other Farmers Weekly Awards winners and taking a look at why they won these prestigious awards.

Winners Neil Baker, Mark Burnell and John Hoskin with Liza Tarbuck

Neil Baker, 'Dairy Farmer of the Year'

Andrew Rees, 'Young Farmer of the Year'

John Hoskin, Overall Winner of 'Farmers Weekly's Farmer of the Year' and also Beef Farmer of the Year

AGRI-EXPO 2010

FRIDAY 29TH OCTOBER 2010 - BORDERWAY MART, CARLISLE

The Agri-Expo event was held at Borderway mart, Carlisle on Friday 29th October 2010. This year it was the biggest and the best attracting the cream of livestock from throughout the country.

A record of 10,000 visitors, 680 livestock entries and 136 trade stands made this one of the largest single day events in the country. Mr Adam Henson, BBC TV Countryfile presenter was the guest of honour at the event. The overall cattle championship was awarded to Michael and Melanie Alford, Cullompton, Devon for a 13 month old cross heifer, and the sheep honours went to a pair of Texel cross lambs from John Hall, Inglewood Edge, Penrith.

Capontree Veterinary Centre and Paragon Veterinary Group attended the event and flew the 'XLVets flag'; over 300 cups of tea and coffee were served on the Capontree stand, attracting farmers from all over the country. Pauline Graham from Capontree commented, 'It was very interesting to see how the farmers from many XLVets practices came to the stand and were very pleased that we were providing this hospitality.'

'There was a positive atmosphere throughout the day and all the staff from Capontree thoroughly enjoyed being involved and being part of such a successful event,' said Pauline.

XLVets Farm Conference

XLVets hosted its first conference for members **'Developing the Partnership between Dairy Farmer and Vet'** on 30th September 2010.

The conference provided XLVets farm animal vets with the opportunity to look to the future of UK agriculture, with a specific view to the development of their farm animal practice; focusing on how it will need to adapt to meet the needs of farm clients of the future.

Our thanks must go to Annie Graham from Sainsbury's, dairy farmer Phil Latham and Donal Murphy from NOAH for providing an interesting perspective from the supply and demand chain.

This was followed in the afternoon with presentations from XLVets members. Firstly Alistair Johnston (Minster Vets) gave an insight into the UK poultry industry and vet involvement within the demand chain. Kate Burnby (Willows) then provided an insight into using new media to communicate with clients and finally Owen Atkinson (Lambert, Leonard & May) presented his findings from his recently completed Nuffield Scholarship studying the role of the vet in knowledge transfer. His travels took him to the Netherlands, Wisconsin, USA and New Zealand where he was able to see first-hand some interesting developments in the provision of farm veterinary services.

AgriScot 2010

XLVets attended AgriScot held at Edinburgh on Wednesday 17th November 2010. The XLVets stand provided a platform for the launch of FarmSkills in Scotland.

On the day there were two 'mini-bite' challenges - giving visitors the chance to learn a new skill and take something practical home with them to use on the farm.

As always, the stand would not be complete without the XLVets juggler. Back by popular demand, the juggler taught many people a new skill and provided a reminder to farmers of the diverse range of FarmSkills practical-based training courses that are now available in Scotland.

A huge thank you must go to all XLVets members who helped throughout the day, including;

Neil Laing & Charles Marwood
Clyde Veterinary Group

Ed Hewitt
Armour Veterinary Centre

Andy Cant
Northvet Veterinary Group

Colin Lindsay
Capontree Veterinary Centre

Jemma Reed
Paragon Veterinary Group

Ian Gill
Thrums Veterinary Group

For further details of XLVets FarmSkills training courses in Scotland and throughout the rest of the UK, visit www.farm-skills.co.uk

Veterinary Surgeon	Julian Allen
XLVets Practice	Friars Moor, Dorset

Dr Sam Leadley, a calf and heifer management specialist in New York State visited several XLVets practices earlier this year. Elanco Animal Health kindly sponsored a number of meetings and farm walks giving Dr Leadley an opportunity to share his knowledge and experience with UK farmers and vets. This is the concluding article summarising the key points.

Calf Rearing in cold weather...

In a previous article we focussed on colostrum management. Here we look at the challenges of rearing calves in cold weather. Scours and pneumonia often become more prevalent during the winter months and we consider some factors that make calves more susceptible to disease.

Feeding - make sure they get enough energy...

Calves that are under-fed and energy deficient will be at a high risk of developing the common calf-hood diseases such as scours and pneumonia. This is because at low or negative growth rates their immune systems do not mature rapidly enough to provide protection from infectious disease.

- Young calves need energy for both maintenance and growth. Energy requirements for maintenance increase significantly in a cold environment. The Lower Critical Temperature (LTC) is the temperature at which an animal begins to use extra energy to maintain normal body temperature. Calves under 3 weeks old have an LCT of 20°C and they require 40% more energy for maintenance when temperatures drop to 0°C.
- We can easily assess energy status in young calves by checking body condition score. If the backbone in calves 2-3 weeks of age feels more prominent than it does in newborn calves this tells us they have been using up the body reserves (muscle and fat) that they were born with in order to keep warm. In other words, the calves are energy deficient and feeding has been inadequate.

Table 1: Milk replacer requirements at varying temperatures (for a 40kg calf)

Temperature (°C)	Milk for Maintenance (litres)	Milk for 0.4kg Gain (litres)	Total Milk Required (litres)
16	3	2	5
4	4	2	6
-6	5	2	7

Increase energy supply in cold weather...

Table 1 above gives volumes of standard milk replacer (mixed at 125g per litre) required for maintenance and 0.4kg of weight gain at decreasing environmental temperatures for a 40 kg calf.

The volume of milk required for maintenance increases significantly as temperatures decline. A calf fed 2 litres twice daily at 16°C will gain weight, but below 4°C it will start losing weight. A growth rate of 0.4kg per day is the minimum threshold for adequate immune system development during the first 4 weeks of life. Therefore more milk must be given during cold weather, particularly to younger calves which are only consuming small amounts of solid feed.

The energy content of milk depends on the level of milk solids it contains. How can we increase the total quantity of milk solids supplied?

- Increase the volume of milk given at each feed, or add an extra daily feed. On systems where older calves are fed milk once a day, keep the younger calves on twice daily milk feeds for longer during cold weather.
- Increase the dry matter content of milk. When using milk replacer the amount of powder can be increased from 125g/litre to 160g/litre. Alternatively, when using whole milk, try to feed 'transition milk' produced during the first 3-4 days after calving to the youngest calves. This contains up to 50% more milk solids than bulk milk. Feeding Jersey milk would have a similar effect!
- The principal energy source in milk is fat. Use a milk replacer with adequate fat content (20%) in winter.
- Larger calves obviously require more energy for maintenance than smaller calves. Make sure they are fed accordingly.

Maximise intakes of solid feed

Older calves start to consume solid feed and become less reliant on milk for energy supply. They also become more tolerant to cold. The LCT of calves 3-6 weeks of age is 10°C. Rumen development is stimulated by the consumption of concentrate feeds and rumen fermentation generates heat which helps maintain body temperature.

- Calf starter should be supplied ad-lib from the first few days of life. Provide small amounts that are kept fresh, dry and palatable.
- Remember that calves should always have a supply of fresh clean water. Ideally, provide warm water in cold weather. Research shows that solid feed consumption is reduced by 40% when milk is the only liquid provided. Most milk bypasses the rumen to enter the abomasum through the oesophageal groove. The rumen needs an adequate water supply to function.
- At weaning calves need to consume sufficient concentrates to ensure continuation of an adequate energy supply. Calves should be eating at least 1kg concentrate daily prior to weaning in warmer weather. Feed requirements at weaning increase by 50% as temperatures fall from 16°C to below freezing. Management changes at weaning such as moving, mixing and dehorning will reduce feed intakes. Coccidiosis can also reduce appetite around weaning and may need to be controlled.

Dr Sam Leadley

Housing and environment - avoid chilling and maintain good hygiene

- Calves that become chilled are more susceptible to disease. Well fed calves can tolerate low temperatures provided they can escape from draughts and have a clean, dry straw bed that they can 'nest' down into. Body heat will be lost rapidly when lying on a damp poorly drained bed.
- It is important to strike a balance between providing good ventilation and avoiding excessive air movement at calf level. Create barriers with straw bales to shelter calves from the wind, particularly in large open pens. Provide calves with a canopy at the back of a pen made from a wire netting frame covered by straw about 4 feet above the ground. This provides shelter from cold downdrafts and helps to retain body heat which will create a more comfortable micro-climate for the calf.
- Calves born at this time of year are often housed in an environment where there has been a steady build up of disease - causing organisms through the winter. If you are experiencing problems try to start new calves in a clean 'fresh' environment. Remember the principle of 'all-in, all-out' and avoid over-stocking.

CONCLUSIONS

- Underfeeding is a key risk factor for disease in winter-born calves. Ensure they are fed to support growth rates of at least 0.4 kg per day.
- Provide suitable housing to keep calves comfortable at cold temperatures.

There are some advantages to rearing calves in cold weather - pathogen survival is reduced and there is no heat stress!

So, let's make the most of the opportunity!

Herd health activities of Gold Cup finalists

Each year, the prestigious NMR/RABDF Gold Cup is awarded to the dairy farm judged as being the most efficient for milk production. Entrants provide information on herd performance, including production, feed, health and fertility information. A panel of judges then assesses factors such as the physical and management performance of the farm, involvement in environmental schemes and plans for the future.

Aside from the production statistics, here's a look at what goes on behind the scenes for three of this year's finalists to ensure health is not limiting their herd's efficiency and production.

TYNDALE
Farm Veterinary Practice

Chris King and Michael King

Gold Cup winners: Michael and Chris King

Will Tulley Tyndale Farm Veterinary Practice

Team work is the key to success...

For Gold Cup winners Michael and Chris King of Two Pools Farm, near Bristol, taking a team approach has been an essential part of their success. The Kingspool Holstein herd is managed by Martyn Smith and his wife Lyn, regular staff meetings are held, and vet Will Tulley from Tyndale Vet Practice visits the farm weekly.

Over the past four years, herd number at Two Pools Farm has increased by about 25%, to 320 milking cows. These are milked twice a day and lactation yield per cow is 9,710 litres.

Herd nutrition

Quarterly meetings are held with Will and the farm's nutritionist and farm staff. Written action plans are drawn up for the next three months with specific people assigned to different tasks.

Mike explains: 'A lot of our focus is to make sure no problems occur in the first place. With Will's help we body condition score all the herd and keep a chart on the wall so we can all see which cows are on the high or low side of ideal. Will also regularly checks the manure consistency and digestibility which give clues as to how cows are performing on the feed.'

New heifer housing

Heifers are now kept separately from the main herd to help reduce stress. They only join the cows when they have had their second calf.

Mike King adds: 'Beforehand, heifers were loose-housed with the rest of the herd. But now they are separate, fertility has improved and helped us achieve a cull rate of only 11%.'

Quarterly meetings are held with the farm's nutritionist, staff and vet Will Tulley, to review the herd's nutrition.

WILL TULLEY

We've made some management changes, to ensure calves get off to a really good start. At Two Pools Farm, everything is done properly, there's a very proactive attitude to herd health.

For the past year they've been housed in a new building with cubicles adapted to provide a shorter lying length than in the cows' shed. This means all the muck falls into the passageway and not onto the end of the step, helping ensure cleaner cows and udders.

'Once a heifer has had mastitis it's actually difficult to get rid of it. So it's best to prevent the infection from occurring in the first place. We've moved to using sand in the cubicles too, and seen a dramatic reduction in mastitis cases,' says Mike.

Management around calving

Three weeks before calving, cows are moved into the transition cow group and put onto a full DCAB diet. Once they start to calve they are moved into a separate pen. Immediately after calving they are given a warm drink of water containing electrolytes. They are also put straight onto the TMR milking ration. Mike explains: 'There had been some problems with DAs, retained cleansings and milk fever. But now third-lactation cows and older receive a calcium bolus at their first milking, and are now cleansing within the first few hours. Milk fever cases are running at less than 2%.'

For the past four years, fresh cows have been put into a group of their own. Here they are allowed 25% more space. Cows are loose-housed on straw although a switch to sand may be made if straw becomes hard to get. Cows remain in the group for three weeks to ensure good dry matter intakes are resumed and there are no retained cleansings, before re-joining the main herd. This change in management has put a stop to the post-calving metabolic problems that used to occur.

Pedometers signal heats

A more proactive approach to spotting heats was required. So for the past 18 months, pedometers have been used to signal when cows are on heat. When a cow comes into the parlour, data from the pedometer is automatically uploaded and before the cow goes back out to the shed, it can be AI-ed.

Pedometers are used to signal when cows are in oestrus. Data from the pedometer is uploaded when the cow enters the parlour.

This has proven very useful as many of the high yielding cows had only short quiet heats, often at night, and sometimes only for half an hour. The pedometers have enabled the calving index to be reduced by 20 days and because they do the same job as electronic collars, it's also cut the need for manual inputting of data.

FARM FACTS
AT TWO POOLS FARM

- 320 milking cows
- 2x a day milking
- 9,710 litres/cow
- 3.85% butterfat
- 3.15% protein

CALF CARE
AT TWO POOLS FARM

Martyn Smith joined as herd manager at Two Pools Farm just over a year ago, and his wife Lyn has taken charge of the calf shed. Will explains: 'In this time we've made some management changes, to ensure calves get off to a really good start.' All newborn calves are bottle-fed 3 litres of colostrum within the first 12 hours of life. And a second 3-litre colostrum feed within 24 hours. They then move onto two daily feeds of pasteurised whole milk. At one week old, calves are also given access to water and home-mixed feed.

Lyn adds: 'Calves are kept individually penned and gradually weaned off milk only once they are 8 weeks old, and are eating at least 2kg/day of home-mixed feed with lots of hay. Feed is always presented freshly mixed, with leftover feed given to older, less fussy, calves.'

There used to be a lot of pneumonia in calves pre-weaning. Will adds: 'Tests revealed RSV and PI13 and also antibodies to M.bovis - for which there is no vaccine. So calves are now vaccinated against RSV and PI13 prior to weaning, and we have also taken extra steps to reduce the risk of respiratory infections. These have included: improving the shed's ventilation with an extractor fan, after carrying out a smoke test; and from autumn onwards, the backs of the youngstock are clipped to help prevent sweating.'

Although calves aren't normally weighed, growth rates are very good and heifers are served at 15-17 months with good condition scores and height.

Will says: 'At Two Pools Farm, everything is done properly, there's a very proactive attitude to herd health.' Mike King adds: 'It's not about fixing the problem it's about preventing it from happening in the first place. That's where a vet's strength lies. We also need to take a team approach, not just with our vet and vet practice, but involving everyone who works on the farm.'

For Martyn and Lyn, relative newcomers to Two Pools Farm, winning the Gold Cup has been a tremendous achievement. Martyn says: 'We had set ourselves the target of winning the Gold Cup within the next five years. So we were absolutely delighted when we did it in one!'

Gold Cup finalist: Neil Baker

Jon Reader Synergy Farm Health

Attention to detail improves animal health and production

Neil Baker's attention to detail and determination to measure disease problems and reduce them has been key to his successes. He not only reached the finals of the Gold Cup this year, he was then declared Dairy Farmer of the Year in the Farmers Weekly Awards.

Neil milks just over 1,000 Holstein cows at Rushywood Farm near Crewkerne. A third of the milk is used to produce vintage cheddar on the farm, and the rest is sold to Medina Dairies. His herd is currently averaging yields of 9,500 litres with the target to have increased to 1,200 cows averaging 10,500 litres in 12 months' time.

Neil's vet Jon Reader of Synergy Animal Health explains: 'Neil has huge expectations - he is currently milking just over 1,000 cows and wants to bring mastitis and lameness cases down to zero. With Neil's attention to detail and a good building set up, Rushywood Farm has an incredibly low lameness and mastitis rate despite being such a big herd. It all goes to show, that well-run large dairy units can support excellent production and animal health.'

Cows are mobility-scored fortnightly by one of Synergy's para-professionals, and any lame cows are examined within 48 hours.

Neil Baker: Gold Cup finalist AND winner of the Dairy Farmer of the Year in the Farmers Weekly Awards

JON READER

Because of the herd size, there are economies of scale, and improved efficiencies, all of which is beneficial for the cows. In fact, if I were a cow, I'd want to be on this unit.

FARM FACTS
AT RUSHYWOOD FARM

- 1,050 milking cows
- 3x a day milking
- 9,550 litre yield
- 4.1% butterfat
- 3.29% protein

A new building holds 300 high yielding cows. Rubber matting has been put along the feed face so that animals don't have to stand on hard concrete when feeding. The width between the rails is 30" not 24" which means there is room for cows to stand side by side.

Comfort enhanced by rubber matting.

The head-locks along the feed fence allow it to double up as an inspection area.

Neil explains: 'The rails also include a head-locking system, so that the shed also doubles up as an inspection area for tail painting and routine vet work. The aim is to have cows locked for less than an hour, so that when we unlock the gates, they just continue eating and we have not interrupted their routine.'

Inspection area for tail painting and routine work.

Mastitis levels have dropped dramatically to a rolling average of 10 cow cases/100 cows/year - well below the national average of 50-60. Neil believes 75% of mastitis problems begin in the milking parlour. So here there is a strict protocol for teat preparation, hygiene, and checking pulsation and vacuum levels of the milking machine. Additionally, care to keep housing and bedding clean ensures that cows come into the parlour in a clean state.

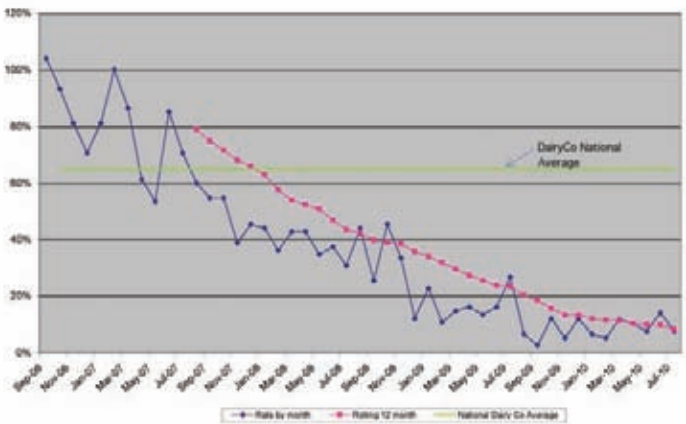
From Neil's visits to dairy units in the States he has adopted the practice of 'Just-In-Time' calving. As soon as the calf starts to show, the cow is removed from the transition group and put into a large calving pen. Here there is plenty of room for cows to eat and lie down. Daily inspections are made after calving to check each animal's condition and temperature. Jon will examine them on his weekly visit and check for retained cleansings and other peri-parturient disease. Cows only re-join the milking herd when they are deemed to be clear of uterine disease.

Neil's farm office walls are adorned with charts and management decisions are based on data. Every six months, Neil and Jon sit down and review the vet bill, assessing the relative costs of vet fees, vaccines and treatment drugs. Jon also gets involved in monthly nutrition meetings at Rushywood Farm.

Neil adds: 'Everything is done for the convenience and comfort of the cow, rather than fitting the herd around machinery or labour.'

Jon adds: 'Because of the herd size, there are economies of scale, and improved efficiencies, all of which is beneficial for the cows. In fact, if I were a cow, I'd want to be on this unit.'

MASTITIS CASES PER 100



Attention to cow cleanliness, parlour hygiene, milking protocols and milking machine checks have all contributed to bringing mastitis cases down to levels dramatically below the national average.

TYNDALE
Farm Veterinary Practice

Gold Cup finalist: Chris Simmons

David Preece Tyndale Farm Veterinary Practice

A focused approach for a relaxed and very productive herd at Folly Farm...

Gold Cup finalist Chris Simmons is focused on 'getting litres into the tank'. No wonder that he was also runner up in the Chris May Memorial Award for the best herd average lifetime daily yield, an award he has won for the previous two years.

The Holstein herd at Folly Farm, Gloucestershire is milked three times a day and is currently averaging yields of 11,400 litres/cow, with 3.82% butterfat and 3.18% protein. Helping Chris to stay focused on production, as well as ensuring a healthy fertile herd, is David Preece from Tyndale Farm Vets.

Dry cows

Chris explains: 'We only dry cows off once yields have fallen to less than 15 litres/day. This is based on research which has shown that for every litre above this yield, there's a 10% extra chance of the cow getting mastitis in the next lactation.'

For the past two years Chris has managed dry cows in a single group, with no transition group and a short dry period - an average of 42 days. This enables just one group of dry cows to be kept - there is no transition group or separate ration, just a dry cow ration, so there is no risk of overfeeding them. It also reduces the stress for cows of changing group, and only requires one shed. The dry cow ration is made up of maize silage, straw, hay and anionic salts. 'It's not a full DCAB diet,' explains Chris, 'so there is still some risk of milk fever, but it does encourage better dry matter intakes.' Home-grown ryegrass haylage is also added on top of the mix and fed to appetite.

Sand in cubicles

Dry cows are kept in cubicles bedded with sand. This helps reduce mastitis infections as the bacterial count per square metre is far less with sand than with straw.

The freshly calved cows are also kept on sand, in pens of one or two. The pens need to be managed like a stable, a process which takes more time but keeps the sand clean, thereby reducing the mastitis risk.

Chris Simmons believes relaxed cows, like relaxed people, are more productive.

Freshly calved cows on sand.

DAVID PREECE

By looking after the freshly calved cow properly, you can avoid metabolic diseases and help return the cow to cycling again.

Tailpainting is used to detect heats.

BVD control

The herd at Folly Farm had been BVD-free. However, bulk tank checks revealed rising levels of BVD antibodies signalling that active infection was present in the herd. Further individual milk sampling and blood tests finally identified two PI (persistently infected animals): a calf and a yearling heifer. BVD infection is thought to have entered the herd when young heifers broke out and mixed with a neighbour's cattle.

The herd is now vaccinated and the BVD status of calves is being routinely tested. In the long term, a few animals will be left unvaccinated to act as 'sentinels' - if they remain BVD antibody negative it will show there is no active infection in the herd.

Breeding

Cows are tail painted to help detect heats, and the state of the chalking is watched constantly by staff. David says: 'This method makes you spend the time and look at every animal - it's a good discipline to have.'

Fresh calved cows are kept 18 cows in a 24 cubicle shed and checked three times a week. Chris has established a protocol and trained staff to check and record rectal temperatures, gut fill, and degree of metritis - for which cows are scored 1 to 5 on how 'dirty' they are. If, one week after calving, cows are still dirty they will be washed out.

A number of measures are taken to help encourage intakes: the feed is always presented fresh, and pushed up four times a day; a propylene glycol solution is poured over it; and haylage is fed at the end of each day.

David says: 'By looking after the freshly calved cow properly, you can avoid metabolic diseases and help return the cow to cycling again. There is evidence that metabolic stress around calving predisposes cows to having twins. The herd used to have a 25% twinning rate, but with attention to fresh cow care, it's now fallen to about 5%.'

Two years ago, the calving index at Folly Farm was heading for 430 days, so Chris has taken a very targeted and proactive approach to get fertility back on track.

Cows that have not come bulling by 45 days post-calving are given prostaglandin. This gets 75% of them into oestrus and they are then AI-ed. Cows that fail to come bulling are checked by David on one of his fortnightly visits, before entering a synchronisation programme, and later being served blind. Semen is paid for on a per pregnancy basis, so this approach is economically justifiable. The aim is that by 60 days after calving, all cows have been served. The pregnancy rate of eligible cows in any three week period is now a very good 18%, and the calving index is 403 days and dropping.

Chris says: 'It's important to stay focused on fertility and cow health, all the time, not just when the vet turns up.' David adds: 'Chris likes to investigate new ways of improving herd health and productivity. I've been making routine visits to the farm for over a decade, and so I know it really well. This means we can have some really good open discussions and evaluate how best to go forward to keep his bulk tank filled to the max.'

This calf is awaiting tests to confirm that it is a PI (persistently infected with BVD) animal. Then it will be culled.

Chris is very focused on getting litres into the tank - the herd is milked three times a day.

KINGSWAY Veterinary Group

Veterinary Surgeon	Andy Barrett
XLVets Practice	Kingsway Veterinary Group, Skipton

The sheep sales have only just finished and already lambing is just round the corner. Lambing in this practice is no longer a rush of frantic activity in the spring, like Christmas it lasts longer every year. Pedigree sheep start after Christmas and hill flocks are still at it into May but good preparation whenever sheep are due will help ensure a healthy crop of lambs.

GET READY FOR LAMBING

Andy Barrett Kingsway Veterinary Group

Getting ewes' nutritional status right is the single most important aspect of preparation; two thirds of lamb deaths are a result of conditions that have their origin during pregnancy rather than at lambing time. Growth of the placenta is important because it determines the size of the lambs and, the hormones the placenta produces affect the yield of colostrum and influence the mothering ability of the ewe.

Scanning to check lamb numbers allows better feeding of ewes carrying multiple lambs and condition scoring sheep as often as they are handled means that feeding can be corrected if necessary. Lowland ewes should be in condition score three at the end of the third month of pregnancy and hill sheep score two. If a lot of sheep are thin, liver fluke, external parasites or trace element problems may be responsible, the higher the proportion of the flock that are affected the more likely it is that there is a management problem. Faecal or wool examination and blood sampling may help sort this out.

Three quarters of foetal growth occurs in the last six weeks of pregnancy and ewes in good body condition at this time have the lowest lamb losses if they are fed well until lambing. Condition scores change relatively slowly, if there are doubts about the adequacy of nutrition then blood sampling a group of 10 ewes a month before lambing and testing BHB levels provides a cheap and quick way of checking feeding.

Flat rate feeding while easier to manage requires good quality forage and may not be sufficient for very thin ewes. If swayback has been previously diagnosed copper supplementation should be given in mid-pregnancy. Glass boluses supply copper over the longest period, copper capsules and injections will also effectively prevent swayback.

Copper can be very toxic to lowland sheep and should not be used unless clinical swayback problems have occurred, be particularly careful of giving copper supplements just before housing sheep and feeding them concentrates which supply copper in a more available form.

Clostridial vaccine boosters should be given to ewes six to eight weeks before lambing is due. If replacement ewes have been bought in it may be best to give them a full course rather than assuming that they have previously been injected.

Many farms rely on extra help when lambing is in full swing. Vet and agriculture students are often available; your local XLVets practice will be able to put you in touch with the vet schools to arrange for an extra pair of hands. With five percent of ewes in UK flocks dying around lambing time; three quarters of these because of lambing difficulties, it is worth taking the time to make sure that any helpers who aren't experienced shepherds know when to call for help.

Plans should also be made to treat sheep suffering from the problems most flocks suffer at lambing time like prolapses, twin lamb disease, hypocalcaemia and mastitis.

In large flocks written protocols will help all staff to know what treatment should be given.

Finally a check round the lambing shed and medicine cupboard will help make sure that everything needed is to hand.

LAMBING CHECKLIST

- ✓ Arm length disposable gloves
- ✓ Lubricant
- ✓ A head rope or lambing snare
- ✓ Disinfectant solution
- ✓ Calcium injection
- ✓ Energy supplement like propylene glycol to treat twin lamb disease
- ✓ Syringes and needles
- ✓ Antibiotic injections for treating mastitis and metritis
- ✓ Anti-inflammatory injection for use after lambing
- ✓ Prolapse retainers
- ✓ Strong iodine (10% tincture of iodine) for dipping navels
- ✓ Colostrum (ideally frozen sheep colostrum, if not goat or cow or powdered colostrum substitute)
- ✓ Thermometer
- ✓ Stomach tubes
- ✓ A warming box
- ✓ Glucose for intraperitoneal injection of hypothermic lambs
- ✓ Oral antibiotics for watery mouth treatment

COCCIDIOSIS IN CALVES

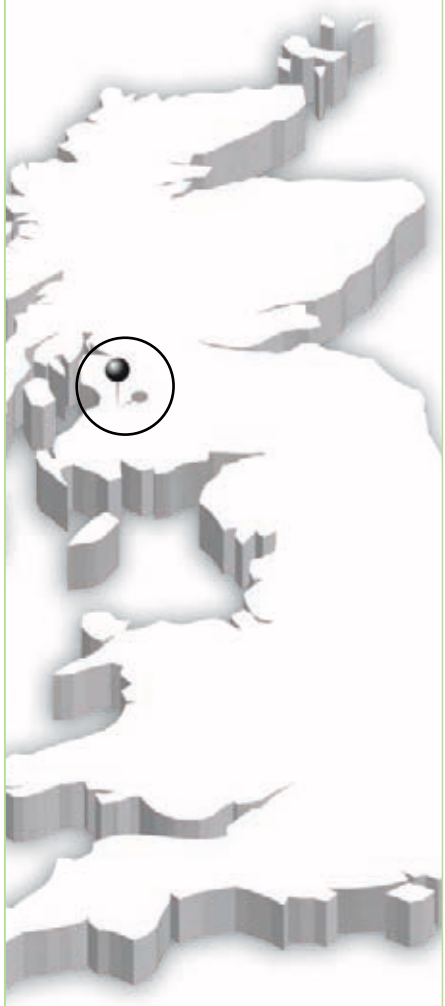
Alan R Walker BVMS MRCVS Armour Veterinary Centre

We recently held an on-farm meeting in conjunction with Harbro (animal feed company) on Coccidiosis in calves. This was as a result of increasing numbers of confirmed cases over the previous year mainly presenting as an ill-thrift problem with the occasional acute case.

Coccidiosis has now been identified as a problem on over 50% of the dairy farms we attend. We are also seeing problems in suckling beef calves.

The calves affected are often around 2-3 months old, although we have seen problems in calves as young as one month old and in calves up to nine months old. This disease is caused by a protozoa, the eggs of which are found in the environment, which the calf then ingests. These eggs are able to survive in the environment for long periods of time and are resistant to many disinfectants.

The protozoa infiltrate the gut lining and replicate causing extensive damage to the intestines which leads to decreased absorption of fluids and nutrients and eventually diarrhoea.



Veterinary Surgeon Alan Walker

XLVets Practice Armour Veterinary Centre, Ayrshire

ALAN WALKER

Coccidiosis has now been identified as a problem on over 50% of the dairy farms we attend. We are also seeing problems in suckling beef calves.

CLINICAL SIGNS

Affected calves often have a dry hair coat and are failing to thrive. Although still eating these calves have a reduced appetite. They often produce grey diarrhoea and have soiled rear quarters. Those more severely affected will pass blood in their faeces and will strain when they do so. Occasionally calves will have such badly damaged guts, that they may fail to recover.

Although only a few calves in the group may look as though they are affected it is best to treat the entire group. Calves with a sub-clinical Coccidiosis infection will have reduced feed intakes and will have poorer feed conversion rates. Growth rates in the entire group will be reduced. Periods of stress such as weaning, or calves changing groups can often lead to clinical signs due to reduced immunity at this time.

Diagnosis is based on clinical signs and finding Coccidia oocysts in faeces, although not all species will cause clinical disease.

TREATMENT

Calves can be treated in one of two ways. Clinically affected calves can be treated by using an anti-coccidial drench. Where the level of challenge is high some calves may require a second drench three weeks later. Clinically affected calves often require intense nursing with the provision of oral electrolyte fluid if diarrhoea is causing dehydration.

The second option for treatment is to add decoquinate to the feed. This should be thought of as a preventative measure and should be fed to calves throughout the risk period. The feed can be arranged through your feed company. Your feed merchant requires a licence to mix medicated feed stuffs and a prescription is required from your vet, as decoquinate is a prescription only medicine.

IMMUNITY

After exposure to Coccidiosis, immunity will develop in the calves. The use of decoquinate in feed allows immunity to develop during the treatment period.

COCCIDIOSIS PREVENTION

Prevention is about trying to reduce the level of challenge. In housed calves keeping areas dry and well bedded is essential. When groups of calves are moved, an all-in, all-out policy should be adopted with steam cleaning and disinfection with a suitable product, being carried out between groups. Areas around water troughs and feed troughs should be kept as dry as possible. Outdoor troughs should be moved regularly to prevent conditions becoming too dirty.

ADVICE

- All calves should be kept as dry and clean as possible.

- Minimise stress at all times by avoiding mixing especially around weaning.
- Avoid overstocking.
- Early diagnosis and treatment is essential.
- Once diagnosed in-feed prevention will allow immunity to develop without allowing the calves to become clinically affected.

CONCLUSION

From the excellent attendance at the meeting it is clear that Coccidiosis is a major concern for all cattle farmers, especially those rearing their own dairy replacements. Some of the farmers who had previously experienced problems commented that the calves that had been affected failed to catch up and were often three or more months older by the time they had reached bulling weight. With the cost of rearing dairy replacements already increasing, this delay of three months before they reach the parlour can be ill-afforded. Others at the meeting had also commented that some of the worst affected calves never recovered and eventually had to be culled.

Sophie Throup FarmSkills Manager

FarmSkills
GROWING FARM BUSINESS SUCCESS

One of the most popular workshops through FarmSkills is DIY AI, used by beef and dairy farmers to improve conception rates and profitability of the herd. Courses run throughout the UK and last for between 3 and 4 days in length. **Vet Jonathan Statham from the Bishopton Vet Group, Ripon**, outlines the key steps you need to follow to ensure that DIY AI techniques are put to good use.

DIY AI Training

Jonathan Statham Bishopton Veterinary Group, RAFT Solutions Ltd

'How to get cows in calf' is the true aim of AI training. Reproductive performance drives profitability in UK dairy herds and while the first hurdle may be heat detection, the job is far from done at that stage.

There is plenty that may still go wrong before a successful insemination results in the delivery of a live calf and the year on year decline in dairy conception rates (CR) has pushed up the relative importance of CR to heat detection.

Do-it-yourself artificial insemination 'DIY AI' has provided an industry shaping combination of genetic free choice + cost effectiveness. However, for consistently good results, attention to detail at every stage is vital. It is not enough to mechanically deliver semen in the general direction of the uterus.

Successful AI requires the following:

1 Good quality semen
2 Inseminated in the right place
3 Inseminated at the right time

FOUNDATIONS

Anatomy ('where are all the bits?') and physiology ('what do they do?') provide the foundation of AI training.

Creating a mental picture of the uterine tract that can be 'read' with the fingers of the left hand is the key to navigating a true and safe course with the AI catheter or 'gun'. Conception rates suffer if the gun fails to pass the cervix, but insertion too far may also reduce success as semen is inserted into only one horn or trauma occurs to the delicate uterine lining. Similarly, appreciating how the oestrus cycle functions is a huge help in achieving effective timing of insemination and troubleshooting potential problems of heat detection and expression.

BISHOPTON BREEDING
WWW.BISHOPTONBREEDING.CO.UK

AI TECHNIQUE-TWO STEPS

Getting down to the core technique follows the above foundations. **Two distinct steps exist:**

(1) Getting the gun from outside the cow to the cervix

(2) Moving the cervix over the gun

STEP 1

Step 1 is based on PUSHING the cervix away from the inseminator in order to provide a clear, wrinkle free, straight route through the otherwise loose folds of the vagina

STEP 2

Step 2 then requires the cervix to be PULLED carefully back over the AI gun, NOT moving the gun through the cervix! This important difference massively reduces the risk of dangerously shoving the metal AI gun forwards into the sensitive and vulnerable uterine horns where trauma could potentially occur, leading to uterine bleeding and scarring with reduced conception rates. A good grasp of the cervix is essential during this step to allow the fine control of gun position for optimum results.

SEMEN QUALITY & SEMEN HANDLING

What are the chances of achieving a pregnancy from each straw you are currently inseminating with?

Reproductive success is massively multi-factorial and influenced by:

- Infectious disease; BVD, IBR etc
- Nutrition - weeks earlier; at time of follicular recruitment as well as at insemination
- Uterine health; subclinical endometritis may be present in 60% of uteri that otherwise appear clean and healthy
- Social stress; group changes have a major impact on conception rate as stress hormones rise and feed intakes potentially fall. This includes separation of cows waiting for insemination
- Concurrent disease, e.g. lameness and mastitis
- Environment; ventilation and heat stress effects
- Semen quality

This latter factor is all too often taken as read. How good is the quality of the semen in the straw you have just inseminated? Poorly maintained liquid nitrogen flasks and slipshod thawing technique may be robbing you of vital pregnancies despite faultless AI gun position. Flask maintenance is critical - essentially glorified thermos flasks, one sharp knock may be all that is required to damage vacuum and trigger rapid thaw of all contents. They just don't last forever and poorly maintained second hand flasks may represent a real risk of failure. Simple dipstick tests to check levels regularly are the responsibility of the flask owner, not the supplier of liquid nitrogen.

Strict thawing technique pays a big return:

- Never take a straw completely out of the goblet.
- Identify and record straw location for rapid location.
- Work 'below the frost line' in the neck of the flask wherever possible.
- Immerse straws removed from the flask into the thaw-bath within 2 seconds.
- Remove semen straws from the thaw-bath within 15 minutes, as quality will deteriorate if left longer than this.
- Thaw one straw at a time.
- Use a thermometer to check thaw-bath water temperature is between 35-37°C (as directed for sexed semen).
- Thaw quarter cc straws for at least 20 seconds and half cc straws for 40 seconds.
- Ensure thermal protection for straws after thawing; consider use of 'chemise sanitaire' insulated sleeves in cold conditions.

But how good is the quality of semen about to be used? Although good production controls are in place for most semen leaving AI studs, it may take a long journey around the world with multiple repackaging risks for semi-thawing before semen reaches your farm flask. Tracking conception success on dairy management systems such as Interherd may highlight poor performance by some bulls. At Bishopton Breeding, we test thaw straws from batches to assess motility over two hours post-thaw as well as morphology and acrosome integrity. These factors are strongly linked with conception success and are surprisingly variable.

DIY AI offers a great opportunity to take control of reproductive performance in your herd. Attention to detail and overall herd health are critical for success.

FARMSKILLS CASE STUDY

Matthew Webster, Webster and Trewhitt, Sunny Bank Farm, Whixley, North Yorkshire.

'FarmSkills courses give you the upper hand on timing on the farm; now I can AI a cow or trim a cow's foot when I want to and when the animal needs it; I don't have to wait for someone to come and do it for me.'

FARMSKILLS CASE STUDY

Chris Hodgson, Providence Farm, Crayke, near Easingwold, North Yorkshire

Dairy farmer, Chris Hodgson, farms 250 acres in partnership with his parents, milking 100 Holstein Friesian cows with 60 followers. His cows average 8,700 litres and he currently has a calving index of 390 days. All cows and heifers at Providence Farm are inseminated artificially and in May 2010 Chris took part in a 3 day workshop at Bishopton Vets so he could start to be able to AI stock himself as well as through a local AI technician.

Since going on the workshop, Chris has seen positive results in his conception rates and also appreciated learning more about the steps vets, farmers and AI technicians take to improve herd fertility. The first two cows he AI-ed were diagnosed as pregnant first time, which was a boost to his confidence although, as Chris observed, no two cows are the same!

'I'd always had a good relationship with my AI technician, but was interested to know how AI worked. I'd heard about the Bishopton DIY AI course through my local Grassland Society, and so applied to go along. Since going on the course, I have become more aware of heat detection and how I can help improve fertility on the farm. It has been a struggle at times, and serving heifers especially is tricky, but I'm pleased with the way that my DIY AI skills are having a positive benefit to the herd's fertility.'

Chris also finds the fact that you can choose when to service the cows a real benefit. At the moment, he AI's the cows on a night time when all the jobs are done and he is quiet and can concentrate on his technique. Going forward, Chris is looking to build on his skills over the coming months and to further improve conception rates. He is also hoping to move to sexed semen to help boost his follower numbers.

FarmSkills Suite

Who these courses are for

The FarmSkills short courses run in collaboration with XLVets Ltd, are a range of practical livestock health and welfare, and business focussed training opportunities designed specifically for farmers, or those involved in the farming sector.

XLVets is a group of independently owned, progressive veterinary practices that are all committed to the future of the UK livestock industry. The veterinary practices involved work together, sharing experience, and provide knowledge and skill transfer courses to those within the Agricultural industries.

Mode of study

Delivery of each module will take place at an XLVets' satellite centre run over the course of 3-4 teaching days per module, and will be comprised of; lectures, practical sessions, group work and discussion. Courses are led by Veterinary specialists and industry experts and cater for the following areas of the livestock sector:

- Dairy
- Beef
- Sheep
- Pigs

Full attendance at all taught aspects is essential to the achievement of the module.

Course content and structure

All modules can be studied independently. Examples of modules include:

- Bovine Artificial Insemination (DEFRA Certificate of Competence)
- Management of the Pregnant and Parturient Dairy Cow
- Improving Dairy Herd Fertility

Information on other modules available for study can be obtained from FarmSkills or Harper Adams University College.

Assessment

Assessment for all modules is completed in-course and will be comprised of practical tasks, quizzes and practice reports. Module specific assessment criteria can be obtained by contacting either XLVets or Harper Adams University College.

FarmSkills
GROWING FARM BUSINESS SUCCESS

In collaboration with

XLVets
Excellence in Practice

Duration

3-4 days depending on the specific module

Entry requirements

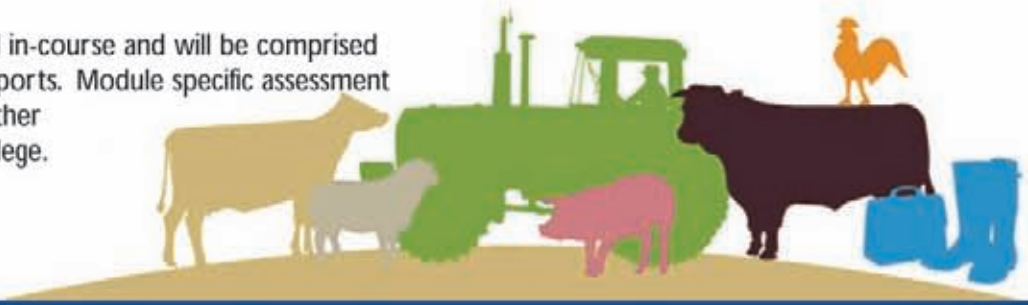
Knowledge and experience of the relevant sector is an important entry requirement and, normally, candidates are already employed or have involvement in the farming industry.

Course fees

Please contact XLVets:
T: 07748 805497
E: farmskills@xlvets.co.uk
W: www.xlvets.co.uk

Further information and application

W: www.farm-skills.co.uk



Animals Business Development Office, Harper Adams University College, Newport, Shropshire TF10 8NB
www.harper-adams.ac.uk/shortcourses

PULL-OUT GUIDE

xl vets
Excellence in Practice

PULL OUT & KEEP

04 FOOTBATHING SOP

Peter Edmondson Shepton Veterinary Group

We all know that good foot care is an essential part of successful dairy farming. This guide provides best practice advice for footbathing, with a specific focus on the treatment and control of Digital Dermatitis.

FarmSkills
GROWING FARM BUSINESS SUCCESS
DAIRY

PULL-OUT GUIDE

FOOTBATHING SOP

- Aim to use 1 litre of footbath solution per cow before changing.
- Calculate the volume of liquid in the footbath when 5 inches (12cm) deep.
- Add the correct amount of chemical/ antibiotic and mix thoroughly.
- Do not allow the footbath level to drop below 4 inches deep.
- Allow cattle to stand on clean concrete for 20 minutes after footbathing to allow absorption of chemicals.
- Aim for one well-managed effective footbath daily.
- Refill with fresh solution when the footbath becomes contaminated, the number of cows footbathed exceeds the number of litres in the footbath or every 48 hours (whichever is the soonest)

FOOTBATHING TO TREAT DIGITAL DERMATITIS

- 5 erythrocin sachets per 100 litres **or,**
- 150g lincospectin per 150 litres
- Run all affected groups of cattle through the footbath daily for three days.
- Put any lame cattle through the footbath first.
- Start control footbathing the day after treatment finishes.

FOOTBATHING TO CONTROL DIGITAL DERMATITIS AND FOUL IN THE FOOT

- 5% formalin (5 litres per 100 litres water) **or,**
- 5% copper sulphate (5kg per 100 litres water) **or,**
- 10% zinc sulphate (10kg per 100 litres water)
- Footbathing to control lameness needs to be done for 5 days every week, every other day or 3 days on/3 days off to be effective.
- Formalin will help harden the claws and skin but is hazardous to humans.
- Hypochlorite, disinfectants and organic acids will help clean and disinfect the feet.
- Footbath all milking and dry cows, stock bulls and heifers.
- Minimise the amount of slurry, mud and dirty water that cattle walk through on the farm.

FIGURE 1: HEALTHY HOOF SHOWING NORMAL WEAR

FIGURE 2: FOOT SHOWING DIGITAL DERMATITIS

FarmSkills
GROWING FARM BUSINESS SUCCESS
DAIRY

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Dalston, Carlisle CA5 7JF
T: (01228) 711788 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.

XLVets New Zealand Dairy Scholarship 2009/10

Joe Davis XLVets New Zealand scholar

In this issue we feature the second part of the report from Joe Davis on his experience in New Zealand. Joe gives us an insight into the work he undertook in Southland.

THE JOB

Calving

One of the major differences between working in New Zealand and working in the UK is the seasonal nature of the work. At home you can expect a calving from the depths of winter to the height of summer, in NZ most farms would expect to see three quarters of their cows calve in a 6 week block in spring with the rest following in the next 2 months. As a vet this means that you are calving cows and treating metabolic problems such as hypocalcaemia all day every day for a concentrated period. The calving pads or paddocks are awash with calves and cows calving, unfortunately, this can lead to the incorrect identification of calved cows and the odd cow with dystocia being missed.

Metabolic problems around calving are a constant battle. It's hard to get enough magnesium into the grazing cows at high risk of milk fever and hypomagnesaemia with little opportunity for even a partial DCAB diet. Magnesium chloride and magnesium sulphate are provided via the water supply from a central dosing system. This provides the calculated daily dose of supplements to the water supply over the day irrespective of variations in water intake. Magnesium oxide is commonly dusted over the grass prior to grazing, or, poured on top of any baleage being fed in order to provide even more magnesium without causing the drinking water to become unpalatable.

Disease

BVD is high on the agenda in New Zealand. Bull testing and vaccination is commonplace and with the introduction a bulk milk test for the virus which is sensitive enough to pick up one infected cow in a bulk tank of milk from 1,000 cows, tracking down persistently infected animals has become a lot simpler. Johne's disease, however, doesn't seem to worry most farmers. I find this surprising as the New Zealand system puts youngstock at high risk of infection. Use of a calving pad where calves come into contact with the faeces from a large number of cows and the use of bulk colostrum from fresh calvers are both potentially dangerous practices. Even though the disease still has low prevalence by UK standards it could cause major problems for the industry in the future.

Minerals

Many New Zealand soils are naturally deficient in cobalt, selenium and copper but high in molybdenum. Reliance on brassicas for dry cow feeding can also lead to deficiencies especially in iodine and copper. It is necessary to keep a close eye on cow mineral levels throughout the cycle to prevent problems occurring. A part of my work was to take liver biopsies and blood samples as part of the VetSouth 'Production Profile PLUS' scheme. Samples are taken pre-calving, pre-mating and pre-drying off. The liver biopsies give an insight into liver stores of copper and the bloods reveal magnesium and selenium levels. Using the biopsy needle for the first time is slightly nerve-wracking. Poking a one foot long stainless steel rod through the cow's diaphragm to embed in her liver without any ultrasound guidance seems initially wrong but the cows deal with it well and you can be surprisingly accurate with the needle. Deficiencies are addressed by drinking water supplementation for the milkers and a combination of long acting injections and boluses for the dry cows away at keep.

Other cases I attended included several cows with photosensitization, a couple of cows with squamous cell carcinomas of the eye or 'cancer eye' (these both needed removal of the eye to stop the cancer spreading), and various other more run-of-the-mill ailments.
I did get a call to a fawning one weekend, my deer knowledge is minimal so I adopted the 'treat it like a large, highly excitable sheep' approach and with the help of a healthy dose of sedative, the fawn was successfully extracted.

A rare Holstein at Gore Show

Spring in New Zealand

New Zealand Calving Season 2010

Amy Avery Endell Veterinary Group

Spring is when all the action happens on dairy farms in New Zealand. We jumped from waiting out the dry period to being flat out into calving with each vet from the Ashburton clinic covering 18,000 cows per person. Sounds like a lot but actually over the whole season (3 months) I only had to assist around 75 calvings. Much of this is down to selecting sensible bulls and good feed management of the cows.

Of the calvings I assisted, probably 90% had dead calves inside but probably only 10% of these were rotten, which was a pleasant surprise as I had heard bad rumours about New Zealand calvings before I started. Perhaps farmers out here are becoming a little more observant to these problems than they used to be? However I can now appreciate it's no easy job at calving time to monitor these numbers of cows.

Most farms would run the herd in 2-3 groups, the milkers, colostrums (up to 4 days calved) and springer mob. Later calving cows might be grazed off farm until they get closer to their due date, enabling better feed management. Many farms will feed some supplement during this time; maize silage is commonly spread out. Some are fed pre-calving on swedes/turnips/fodder beet. Magnesium is supplemented through dosetrons (daily pulses of 60-70g/cow into the water) and spread on the pasture/silage. Most colostrum cows and some milkers will also have limeflour spread or dusted as a calcium supplement post calving.

In the first 3 weeks of calving many farms will have 30 or more cows calving per day, this then slows a little usually in the following 3 weeks and then drops right back for the tail end of calving. Calving spreads can vary from 9 to 14 weeks. Good farms will meet a 6 week target of 79%, so all in all it's a very busy period what with calf management, metabolic problems, induction cow management and several cow groups.

Induction cows are cows that have been mated too late to calve naturally within the farm's planned calving period. We induce cows 6-12 weeks before their calving date; any later than this makes it more likely a live calf will be born and any earlier will mean the cows won't come into milk well or will fail to respond to our injections. This group of cows will have been created back at scanning when we aged the foetuses. They need to be kept separately and given supplementary feed. We give all these cows selenium and vitamin supplements to help prevent retained membranes. As I mentioned in my last article, inductions are slowly being phased out here so in a few years this aspect of New Zealand dairy management won't exist, for good or for bad I guess depending on your viewpoint.

June was an exceptionally wet month for Canterbury, which is normally a very dry area. This resulted in muddy paddocks and a lack of feed; it wasn't however a cold winter so at least we didn't have to deal with that.

The main problems as a result of the wet weather were poorer condition cows and high cell counts. There were more downer cows as well, this seems to be hugely dependent on weather, as in the dry spring last year we sold only about one-third of our metabolic (calcium) products compared with normal.

Shelter is invaluable in helping cows look after themselves and unfortunately as a result of our huge, centre pivot irrigators there are few trees left on farms for this purpose.

Calves are initially kept in sheds for the first few weeks and then usually are put outside when the weather becomes suitable at around 4 weeks of age. We go out in teams of 2 or 3 from the clinic to disbud calves often 100-200 at a time.

All calves are sedated, and then we clip, local and disbud them and additionally check for extra teats, vaccinate for clostridial disease and tag them.100 calves usually takes two of us one and a half hours so it's quite an efficient production line, and also a good work out! Once outside, calves are fed on 50 teat feeders once or twice a day and usually are offered straw and meal as well.

Unfortunately for the calves, Fonterra buys colostrum for a very good price which on some farms can undermine colostral intake. Infectious diarrhoea seems to be the biggest problem out here for young calves. Most will vaccinate the cows against rotavirus. The sheer numbers of calves on the ground at once means there can be a lot of infective agents in the environment which means they are high risk for picking something up. On the other hand, fortunately pneumonia is rare here, probably as a result of the housing situation.

As many of you will be aware following calving it is very important that the cows rid themselves of any uterine infections before they can successfully get back in calf. Many cows will naturally clear up these infections with time but because of the 365 day time pressure we generally have to intervene to speed things up. We use a device called a metrichecker to check the cows in large numbers for uterine infections. Using this enables us to examine cows during a milking, it is not as accurate as examination by hand but when you have 1,000 cows to check it's not a bad substitute! It's basically a small plunger which we push in towards the cervix and then when we remove it we look to see how much pus is on the end. Metrichecking cows 6 weeks post calving will generally mean around 10% of them are treated either with injectable or intrauterine antibiotic, or prostaglandin depending on how bad they are.

Calving was a busy but hugely varied and exciting time out here in New Zealand. I would thoroughly recommend it to anyone considering doing a season out here, vet or farmer.

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