

Livestock

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MATTERS

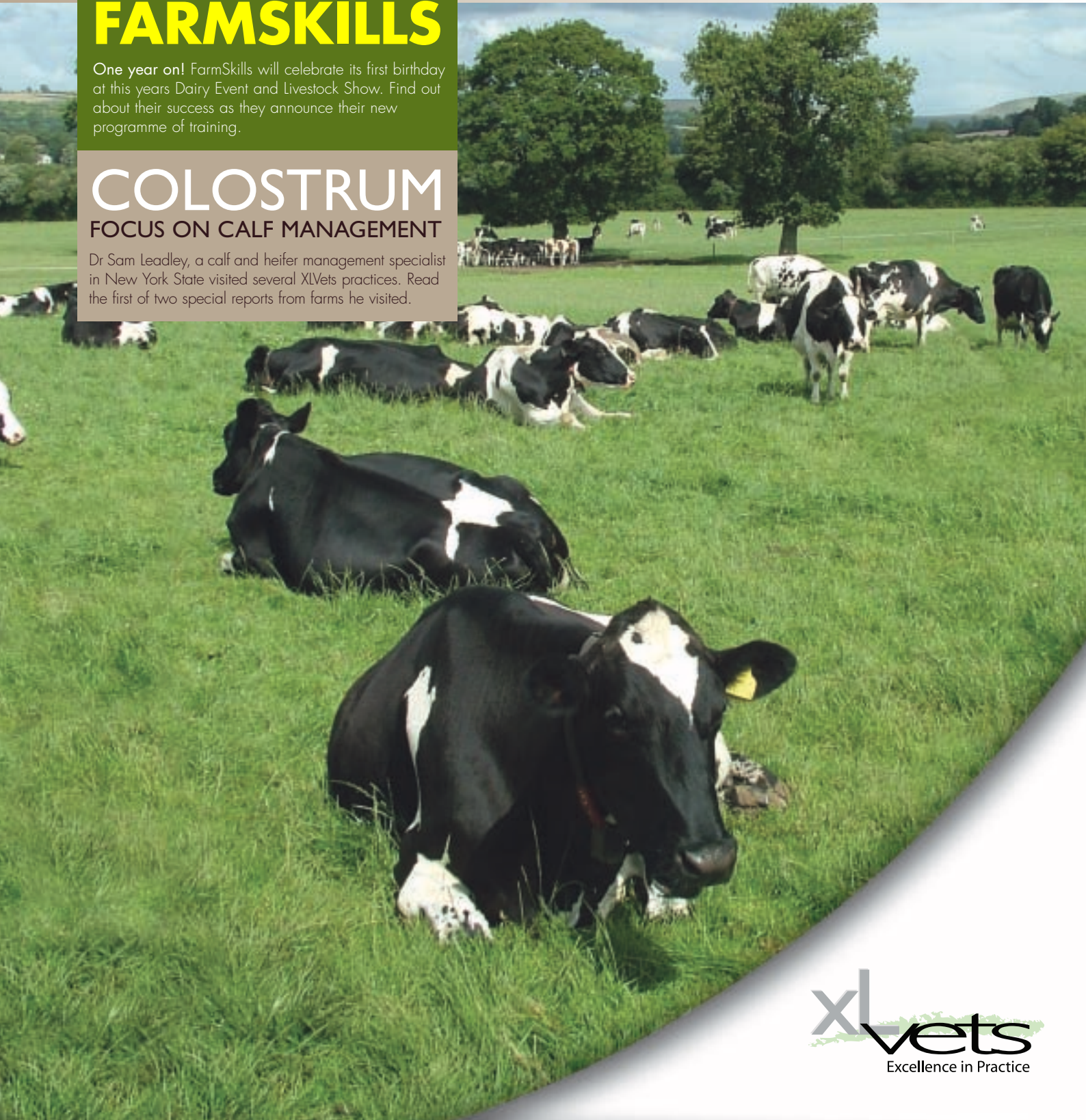
Inside this issue:

FARMSKILLS

One year on! FarmSkills will celebrate its first birthday at this year's Dairy Event and Livestock Show. Find out about their success as they announce their new programme of training.

COLOSTRUM FOCUS ON CALF MANAGEMENT

Dr Sam Leadley, a calf and heifer management specialist in New York State visited several XLVets practices. Read the first of two special reports from farms he visited.



Concerned about **cell counts?**

Too much **mastitis?**

Clover Cell Check is an efficient, cost effective monthly service that helps farmers monitor milk quality.

- Early prompt to prevent problems developing
- Better herd performance through specific advice
- Simple, easy actions for a few cows every month
- Compares your farm to others to show strengths and weaknesses



Call your local XLVets veterinary practice for more information or visit www.clovergroup.eu



AUTUMN EDITION

XLVets is a novel and exciting initiative conceived from within the veterinary profession. We are all independently owned, progressive veterinary practices located throughout the United Kingdom committed to working together for the benefit of our clients.

XLVets Member Practices

608 Vet Group
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 Alnorthumbria Veterinary Group
 Ardene House Veterinary Hospital
 Armour Veterinary Centre
 Belmont Veterinary Centre
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 Wensum Valley Veterinary Surgeons
 Westmorland Veterinary Group
 Willows Veterinary Group
 Wright & Morten

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THE EDITOR

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

In this issue there is a focus on respiratory disease and we see how the problem was tackled on one farm. We also look at the importance of colostrum management for the new-born calf.

For those of you attending this year's Dairy Event; do come along to the XLVets stand where we will be demonstrating how colostrum quality can be determined.

It's one of several 'mini-bite' FarmSkills challenges visitors will be able to join in with on the day.

There's a feature on robotic milking, our pull-out guide with top tips to minimise environmental mastitis and we take a look at infectious abortion in sheep.

We also have the second report from Amy Avery who's out in New Zealand, through the XLVets scholarship and a write-up from Joe Davis, another of the scholars who has now returned to the UK.

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

Joanne Dodgson XLVets



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Focus on Calf Management

Vet Julian Allen, Friars Moor Veterinary Clinic and Dr Sam Leadley, a calf and heifer management specialist from New York State, summarise the key points to good colostrum management for successful calf and heifer rearing on-farm.



XLVets Welcomes New Member Practices...

Armour Veterinary Centre, Ayrshire

We are a mixed practice based in Ayrshire in the South West of Scotland. The area we cover continues to be one of the prominent dairy areas in Scotland, therefore our core business is in the dairy sector. We also have a good mix of pedigree/commercial beef and sheep work.

The practice is split 75% large animal and 25% small animal with both sectors continuing to show healthy growth over the last few years. This expansion has been built on a proactive approach to farm animal medicine.

We have three vets providing a wide range of services to our farm clients: Ed Hewitt, Alan Walker and Eilidh Sellars. We are a young and enthusiastic team and firmly believe that the future of our practice has to be built around sustainable, profitable agriculture in our area. This can only be achieved by building on our successes and remaining an effective contributor to the farm management team.

As a practice we realise that the transfer of information to farmers is vital. To this end our practice meetings have varied in the past

from formal talks, to a more relaxed format of workshops. We have also been involved in speaking at producer group meetings which involved DairyCo, First Milk and Graham's Dairies. These meetings have proved very successful in that they involve farmers who have a common goal of efficient profitable dairy farming.

We are proud to be a 'country practice' and feel we are an integral part of our local community, speaking to local groups when asked and supporting the many local agricultural shows within the area.

We share the same vision as XLVets and together we will strive to provide the level of service and expertise our clients deserve.

Website: www.armourvetcentre.co.uk



Capontree Veterinary Centre, Cumbria

Capontree Vets are a dedicated team of highly motivated professionals offering a compassionate and proactive service to all types of animals in North Cumbria/Northumberland and South West Scotland.

Our team of Directors consists of:

Colin Lindsay - Former Pet Plan Vet of the Year, member of BCVA Council, chair of Medicines group

Barbara Lindsay - Senior Companion Animal Clinician

Kevin Beattie - Certificate holder in Cattle Health and Production

Pauline Graham - Practice Manager and VPMA Council

David McCrea - Production Animal clinician



Assisted by eight young enthusiastic veterinary surgeons with a wide range of skills as diverse as internal medicine, orthopaedics, acupuncture, equine dentistry, hydrotherapy and diagnostic imaging. Primarily we are a mixed Veterinary Practice offering the full range of services all good veterinary practices offer. The Capontree Brand offers high levels of clinical excellence and accepts nothing less. The clients expect this high quality of service and this is why we deal with some of the best Dairy, Beef and Sheep Units and pet owners in the county and possibly the country.

We service 350 farms of which 76 are dairies and the rest are mixed beef and sheep units. Our farm clients represent the whole spectrum of rural clients, from 1,000 cow intensive dairy units demanding intensive and ongoing veterinary input, to 3,000 acre hill farms and very traditional family run units. We believe in the importance of proactive herd/flock health planning and implementing the measure, manage and monitor mantra. We also believe that client education is a must and run foot trimming courses, AI courses and hold regular Farmers Meetings.



On the companion animal side we work from two purpose built premises (Tier 2 RCVS PSS), and a branch surgery. The services offered span the whole spectrum from primary opinion cases to more advanced services such as endoscopy, digital radiography, and colour flow doppler, orthopaedics, TTOs. We provide a compassionate approach backed up with a great nursing staff.

We are delighted to become members of XLVets for a variety of reasons; we are impressed with the initiatives undertaken by XLVets such as the FarmSkills courses. The motivation, enthusiasm and brand value are all excellent. These qualities and achievements are similar to the goals we have set ourselves at Capontree. We believe by joining a group of like minded practices we will be able to share in knowledge and provide added drive and enthusiasm in promoting animal health and the control of the key economic diseases which hinder modern farming.

Visit our web site at www.capontree.vets.co.uk

PAWS Veterinary Health Centre, Warwick

PAWS Veterinary Health Centre is a 12 vet mixed practice based in the market town of Nuneaton in Warwickshire. We are split about 50% large animal and 50% small animal and serve an area within a radius of about 25 miles from Nuneaton, covering mainly North Warwickshire and South Leicestershire.

The practice has always had a very strong interest in farm animal work and currently has over 250 farms registered that are served by our six large animal vets. We have a very proactive approach to farm work with over half our dairy farms having regular fertility/herd health visits and we use Interherd and Herd Companion to give these visits added value and focus. We encourage active herd health planning and have recently been working with some of our farms for the Advantage West Midlands Herd Health Planning Project. We also regularly hold well attended farmer meetings and have recently held meetings as part of the NADIS training programme for the East Midlands. We have a high profile within the local agricultural community and are the show vets for two well supported local shows. Our team of large animal vets has

a very good mix of experience and youthful enthusiasm and we strongly encourage farm animal CPD with regular attendance of BCVA.

PAWS also has a very strong small animal side with a team of very experienced small animal vets working in our large and extensively equipped premises. We offer a high quality first opinion service with a strong emphasis on preventative health care throughout the whole of the pet's life. We also carry out equine work and our large animal vets are happy to deal with the full range of equine first opinion work that can be carried out 'in the field', whilst encouraging referral to local specialist equine practices when the need arises.

PAWS is committed to providing the highest level of service to our clients and we enjoy



our position at the heart of our local agricultural community. We understand that our future depends on the prosperity of our clients and our good reputation in the area. We therefore share XLVets' commitment to excellence in practice and the future of the UK livestock industry.

Clover Cell Check

Clover Cell Check offers dairy farmers a simple approach to management of milk quality and helps control both cell counts and clinical mastitis.

Clover Cell Check is a good example of how information generated on farm can be processed and reported back to busy farmers to help them make faster and more effective decisions. Lots of farm events, including cow movements, births, deaths and other performance criteria are now captured and presented in large data systems that can be shared with your key farm advisers. When it comes to giving better health advice, XLVet member practices now have access to cutting edge data processing tools like Clover Cell Check.

Bill May, of the large Shropshire based dairy practice, Lambert, Leonard & May, believes that better access to farm data has

significantly improved his ability to advise his farm clients. 'It's not just that herds are getting larger, it is also practically impossible to get a sense of how trends are changing on any one farm enterprise over time. Tools like Clover Cell Check have meant that small changes in response to any suggestions we might make can be immediately monitored to assess the benefits.'

To illustrate this point Bill described how he was keen to persuade a large farm, with a significant cell count problem, to segregate his herd. 'Managing a large herd in groups according to the cows cell counts is never popular when there other priorities such as feeding groups, yield groups and breeding groups to be considered. However, in this case, cell counts and clinical mastitis were getting way out of control; despite installing a state of the art backflush system. 'I was convinced that we needed to segregate the

herd to make progress and it was only by monitoring herd performance in close detail through Clover Cell Check that I was able to demonstrate the instant response to splitting the herd.'

XLVets have negotiated open access to the online Clover Cell Check tool for all their member practices so that no dairy farmer need miss out on the opportunity to significantly simplify their herd management. Farmer benefits of the Clover reports include clear listings of cows that need attention every month and much better evidence of herd performance in comparison with other herds served by the same practice.

'Farmers are very keen to check how they are doing in comparison with their neighbours. It's often the first page of the report that they look at!' says Bill May.

Farmers who want to learn more about how Clover Cell Check could help their farm management should contact their local XLVets practice.

MILK QUALITY - AVOIDING ANTIBIOTIC FAILURE

DairyCo has updated its information booklet Milk Quality - Avoiding Antibiotic Failure. The booklet now gives the latest information on what to do to avoid antibiotic failure, including a procedure for farmers to use should they

suspect contamination of milk, tips on identifying treated animals and the recording of treatments. The booklet is suitable for including in the Farm Assurance folder on-farm, and helps all those involved in the milking

process understand the 'why and how' of avoiding antibiotics getting into the food chain.

Download at www.dairyco.org.uk or call 02476 478702 to order a copy.

NMR introduces a new Mastitis Tracker service

NMR is launching a new Mastitis Tracker service in September and will demonstrate it at the Dairy Event, NEC, on the 7th & 8th September.

A unique service and available to British milk producers, Mastitis Tracker uses advanced technology to allow mastitis-causing pathogens to be identified in preserved milk samples as part of routine cow management and integrates the results with the NMR cell count records.

'We have offered producers a service for identifying pathogens in the past but it has involved plate culture techniques that require fresh milk samples. But there is always a risk of contamination in fresh samples which in turn hinders the accuracy of results,' says NMR Group business development manager Hannah Pearse. 'Now that we can replace this technique and use preserved samples -

and provide far more accurate results - we can take mastitis control in our herds to a much higher level.

'Producers include a Mastitis Tracker test request form in the milk samples at the recording time then once the sample has been through the NMR milk quality testing it is sent on to the PCR lab with minimum delay. Results are reported back through the Herd Companion web site within 24 hours of the sample arriving at the lab or by fax or post.'

The hassle-free Mastitis Tracker service opens the door to more advanced mastitis management for British producers. 'It will report trends in pathogens so patterns in groups of cows, such as heifers, old cows



or cohorts can be tracked. It will also identify seasonal patterns that we believe are present in many herds,' adds Ms Pearse.

Mastitis Tracker costs £13 or £14 plus VAT per test depending on volumes tested.

For more information or to order tests contact NMR Customer Services on 0844 7255567 or email customerservices@nmr.co.uk

NSA Sheep 2010



XLVets attended the NSA Sheep 2010 event held at Malvern on 3rd August. The XLVets stand focused on our FarmSkills training programme for farmers. On the day we had three 'mini-bite' challenges - giving visitors the chance to learn a new skill and take something practical home with them to use on the farm.

The first mini-bite challenge was a 'guess the weight of the lambs' competition. Visitors were asked to estimate the weight of two lambs penned on the stand. The lambs were both born at the same time, on the same farm and reared together. The only difference - one was a pure Dorset lamb, the other a Dorset x Zwartbles. The competition aimed to highlight the need to know accurate weights for calculating worming doses. Amazingly there was 11kg difference between the two lambs - not obvious at all from looking at them! Many people underestimated the weights of

the lambs on the day, highlighting the need to weigh lambs and dose according to the heaviest in a group to avoid underdosing.

There was also the chance to see the XLVets Sterimatic system in action. Demonstrations (using a toy sheep this time!!) showed farmers how Sterimatic provides a system for vaccination guns where the needle is cleaned and disinfected before each animal is injected. The Sterimatic set works with existing equipment; fitting almost all vaccinator guns. The demonstrations proved extremely popular throughout the day.



Finally, the stand would not be complete without the XLVets juggler. Back by popular demand following Beef Expo 2010, 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 available (although juggling is not one of them!)

Great Yorkshire Show 2010

For the first time ever, XLVets exhibited at the North's premier agricultural show - the Great Yorkshire Show from 13th to 15th July.

Three Yorkshire practices; Minster Veterinary Practice, Bishopton Veterinary Group and Kingsway Veterinary Group, joined forces to exhibit a stand championing the excellence in practice, people and business support that XLVets practices offer all their clients.

Artwork included profiles of vets, nurses, support staff and farmers - plus a good showing for FarmSkills, which enjoyed recruiting farmers to new courses for Autumn 2010. As well as offering the 'best cup of tea' on the showground, activities included guessing the old fashioned veterinary instruments, and learning how to lamb a (model) sheep and do a caesarean on a toy cow! Despite the rather unpredictable weather a great, if exhausting, time was had by all!





KATE BURNBY BVSc, CertCHP, MRCVS

Independent Veterinary Consultant

And in association with Willows Veterinary Group

About Genomics

It was 1953 - Josef Stalin died of a stroke, Hugh Hefner published the first issue of Playboy magazine, Queen Elizabeth II took her coronation oath and, in February, Watson & Crick described the structure of DNA.

The sum of our DNA describes life - it makes up our genome. Each person and animal has a unique genome - although we also have large portions of our DNA in common. The time and cost required to study the genome continues to reduce.

been developed and used within the Angus breed. This test provides predicted breeding values (MPVs) for 13 production traits after analysing just over 50,000 markers.

Current uses of Genomics

- Parentage testing - e.g. BCMS scheme
- Genetic screening for specific genetic diseases e.g. CVM
- Screening for some simple inherited traits e.g. red vs black coat colour
- Genomic screening for traits within some breeds e.g. Angus
- Some genetics companies utilise genomics e.g. L.I.C.

Benefits

- Test easily for genetic diseases
- Establish family relationships
- Generate breeding values for traits that normally require large numbers of progeny e.g. calving ease
- Generate predicted breeding values for traits that are hard to measure e.g. dry matter intake
- Speed up genetic gain

Improving farm performance and health through genomics opens up a wealth of opportunities for livestock farmers. A drive has been fuelled to develop technologies and computational models to use genetic information to study biological problems and improve animal breeding.

In July we were fortunate to have a visit from Dr. Kent Anderson from Colorado, USA of Pfizer Animal Genetics. Kent spoke to a number of XLVets at several venues, including the Willows Vet Group, about Pfizer's current genomic products and about their exciting research and development plans. The most applicable technologies used do not sequence the whole genome - instead they focus on 'DNA-markers' - small sections of DNA ('SNPs') that are identified and mapped from a sample by an automated process. The number of SNPs that are mapped for a sample may vary from a single marker to over 120,000 markers. The main consideration regarding the number of SNPs mapped is cost.

DNA marker testing enables the relationship between animals to be determined e.g. for parentage validation. Markers for specific genetic diseases can be checked for e.g. CVM and markers for some simple traits like red vs. black coat colour are also a well-established use for the technology. In the USA a test called GeneSTAR 'HD50k' has

To set up tests like the HD50k they need DNA and conventional records e.g. compare the markers from sires with high conventional breeding values for average daily gain to sires with average scores for this trait. In this way markers can be identified that predict animals' likely breeding values. As you can appreciate, far from being made obsolete, recording performance has never been more important. Integration of DNA marker predictions with traditional ancestry, individual and progeny data can result in more rapid genetic progress.

The Future?

- Integration of genomic breeding values into industry standard economic breeding values derived from conventional proving schemes
- Improved selection for traits that are hard to select for e.g. calving ease
- Customised breeding values depending on economics in market looking at for example marbling, of high importance in US, but of less importance currently in UK with its different grading system
- Extension of tests available to more breeds and inclusion of more traits

A word of warning - as we know not all traits are universally applicable to profitability especially in different production systems. Farmers should take advantage of veterinary help to interpret and utilise the values that arise from genomic testing.

PSST... DON'T GET CAUGHT BY PARENTAGE TRAP

There are at least 18,000 UK cattle currently known to be without valid passports, and therefore legally un-saleable, according to the BCMS. As you will know, an appeal against a rejected passport application must be accompanied by proof of parentage from an authorised source. BCMS can be referred to for a detailed account of the process.

To avoid last minute panic as you prepare animals for sale and a missing passport cannot be found, check your records now. If any are missing, they can be applied for and replaced in good time.

For the parentage check, samples are required from the animal itself and the dam. Kits for this purpose from Pfizer Animal Genetics are available from your veterinary practice and your vet will come and take the samples. Results are posted directly back to you from the laboratory.



Veterinary Surgeon	Julian Allen
XLVets Practice	Friars Moor, Dorset



Dr Sam Leadley, a calf and heifer management specialist in New York State visited several XLVet 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 first of two articles summarising the key points.

Focus on Calf Management

Colostrum management

Good colostrum management is essential for successful calf and heifer rearing. When asked which was the most important stage of a calf's life Dr Leadley's reply was 'the first 2 hours', in other words the time when it should receive its first feed of colostrum.

Calves are born with no immunity to infection because protective antibodies, also known as immunoglobulins (IG), are unable to cross the bovine placenta from dam to foetus. It takes several months for the calf's own immune system to become functional and during this time it relies on IG acquired from the dam's colostrum.

Calves with low IG levels are much more likely to die or suffer disease, particularly scours and septicaemia. Research shows that 50% of calves left alone to nurse the dam will not receive adequate colostrum and not achieve protective levels of IG. Colostrum must therefore be hand fed in order to ensure good intakes.

The quantity of IG transferred to the calf depends on several factors:

- **Colostrum quality**

A calf's initial feed must be of first milking colostrum containing high levels of IG. The level of IG in colostrum can easily be estimated on farm with a Colostrometer which measures the specific gravity of colostrum. IG levels in colostrum decline significantly post calving. Colostrum collected 6, 10 and 14 hours post calving compared with that collected at 2 hours had 17%, 27% and 33% less IG respectively. Cows should therefore be milked out as soon as possible after calving to ensure best quality colostrum. Second milking colostrum only contains about 50% of the IG levels present at the first milking and is not suitable for feeding on day one. There are a variety of reasons why individual cows may produce poorer quality colostrum including high yields, calving early, leaking milk, mastitis or short

dry periods of less than 40 days. Heifers generally produce lower IG levels in colostrum than cows. However, when checked with a Colostrometer the colostrum from nearly half of heifers is as good as from mature cows.

- **Timing of the first feed**

Colostrum must be fed as soon as possible after birth and at least within 6 hours. The efficiency of colostrum IG absorption from the calf's intestine declines rapidly following birth. After 6 hours, IG absorption will only be 60% of that achieved immediately after birth. By 24 hours very little IG is absorbed

- **Colostrum quantity**

Calves should receive 2 - 3 litres at the first feed followed by another 2 - 3 litres within the next 8 hours. The volume fed depends on the size of the calf. Large Holstein calves should receive 3 litres. If a second feed is not possible, then feed 10% of body weight in colostrum i.e. 4 litres for Holsteins. Calves can be fed with a bottle or for larger volumes, a clean stomach tube may be necessary. IG is equally well absorbed when colostrum is administered by tube compared with bottle fed colostrum.

- **Efficiency of IG absorption**

Calves that have been stressed by a difficult calving or calves born into a dirty environment which have ingested faecal material containing harmful bacteria prior to receiving colostrum will absorb less IG. Such calves require early administration of high quality colostrum.



JULIAN ALLEN

Excellent colostrum management is the foundation for successful calf rearing. Remember the three Qs. **Quality, Quantity and Quickly.**



BACTERIAL CONTAMINATION OF COLOSTRUM

Bacteria will multiply rapidly in colostrum when stored at room temperature. The number of bacteria can double every 20 minutes at cow body temperature and the resulting 'bacterial soup' described by Dr Leadley can cause significant diarrhoea problems when fed to young calves.

Bacterial contamination can be avoided with improved colostrum handling:

- Colostrum should be harvested from clean dry teats into a clean bucket.
- Feed the fresh colostrum within half an hour after it is harvested. Prompt feeding gets the colostrum into the calf before bacteria start to multiply. Remember to feed with a clean bottle or tube feeder.
- Colostrum held for feeding later in the day should be chilled to less than 15°C within half an hour. Chilling significantly slows the rate of bacterial multiplication. A 2 litre plastic bottle containing ice works well when added to a bucket containing 8 litres of colostrum.
- If necessary, store chilled colostrum in clean sanitised containers in a refrigerator. Check that the temperature in your refrigerator is no higher than 4°C. Even when refrigerated, colostrum quality will deteriorate after 48 hrs.
- It is useful to keep a store of frozen colostrum on farm. Colostrum can be frozen in zip-lock plastic bags. Fill large bags with one litre of colostrum and freeze laid flat in the freezer so they are thin and will thaw quickly when required. Thaw frozen colostrum in 50°C warm (not hot water) to avoid damaging IG. Or use a microwave on low 'defrost' setting, pouring off the liquid as it appears. Using a turntable minimises damage to the IG. Frozen colostrum will preserve antibodies effectively for up to a year.

What else is important to know about colostrum?

- The cow is a major source of potential pathogens to which the calf will be exposed, particularly when hygiene is poor. Dr Leadley favours removing calves from cows as soon as possible after birth to reduce this risk. If a calf has a 'manure meal' while searching for the teat, prior to receiving colostrum, large numbers of harmful bacteria may colonise the gut and cause scours or septicaemia. Whether or not a calf succumbs to disease depends on the balance between its immune defences and the disease challenges it faces.
- As well as providing the calf with IG, colostrum is an important source of energy, minerals and vitamins. It also contains immune cells and proteins which may have a longer term effect on the development of the calf's immune system. Research has shown that animals receiving 4 litres of colostrum at birth gave 550 litres more milk in their first lactation compared with those receiving only 2 litres.
- 2nd milking colostrum and 'transition milk' can be used to blend with whole milk or milk replacer during the first days of life. This provides a source of IG in the calf's intestine which helps protect against scours.
- A simple blood test can be used by your vet to determine whether your colostrum feeding programme is creating adequate passive immunity in your calves.
- In Johnes disease infected herds remember that colostrum from infected cows should not be fed to calves.



SUMMARY

- Excellent colostrum management is the foundation for successful calf rearing. Remember the three Qs. **Quality, Quantity and Quickly.**
- Control bacterial contamination of colostrum through proper handling and storage.



OVINE ABORTION

Clients often proudly report their percentages at scanning but rarely those at weaning. **What happens to the missing lambs that never made it from being scanned to birth?** Abortion in sheep is sadly a well recognised problem on most farms but it should not be accepted as an inevitable part of the lambing process.

The most common causes of abortion in sheep are:

- Enzootic Abortion (*Chlamydomphila abortus*)
- Toxoplasmosis
- Listeria
- Campylobacter
- Salmonella
- Border Disease

Toxoplasmosis and Enzootic Abortion are responsible for over 80% of the abortions diagnosed by the Veterinary Laboratories Agency (VLA) each year and can also lead to weak and sickly lambs which die soon after birth.

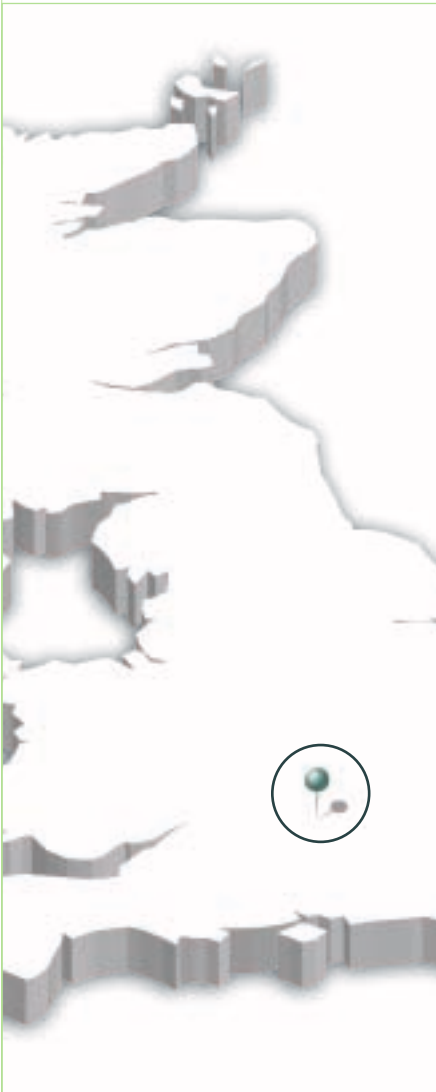
Toxoplasmosis

The cause of Toxoplasmosis is a small organism called a protozoa which is spread via cat faeces left in, or near feed. The sheep ingest the organism and it is then replicated in the sheep's gut before being passed out again in the dung.

If ewes are infected in early pregnancy it may result in embryonic death and resorption of the embryo. Infection during mid-pregnancy may result in foetal death and lead to mummies, whilst infection in late pregnancy may result in abortion of freshly dead lambs or the birth of weakly lambs which die soon after birth.

The cat is such an important part of the cycle that it is virtually impossible to keep your farm clean of this infection.

Killing off the farm cat also does not work (and is not necessary!) as generally the infection is only spread by each individual cat for 2 weeks whilst it is young. Bought in feed and pasture could also be contaminated with cat faeces.



Enzootic abortion

Chlamydia abortus is a small organism very much like a bacteria which is spread via vaginal secretions and placental membranes at the time of lambing. It spreads to the foetus via the placenta and causes abortion and stillbirth, or may produce weakly lambs.

If infection gets into ewes prior to or around tugging, abortions will occur or lambs will be born weak and poor.

If the ewe is infected during the last 5-6 weeks of pregnancy or after lambing these ewes will appear to be uninfected until the following lambing season when abortions/weakly lambs will occur.

Infection causing only a few abortions one year can ultimately lead to over 30% of the flock aborting the following year producing 'abortion storms'.

Zoonotic

It is a very important fact to point out that both Toxoplasmosis and Chlamydia are zoonotic which means they can be transmitted to people. It is important that pregnant women are not involved with lambing as these infections will cause abortion in humans.



ACTION PLAN TO PREVENT ABORTIONS AND REDUCE LOSSES

- Vaccinate all breeding ewes and ewe lambs with Vaccines against Toxoplasma and Enzootic Abortion.
- All replacement animals should then be sourced from Enzootic Abortion free flocks (accredited) and vaccinated before tugging.
- Keep all food stores including hay protected from contamination by cat faeces.
- Isolate all aborted ewes away from the remainder of the flock. Remove and burn all bedding from lambing pen and disinfect between ewes.



- Keep aborted fetuses and placentas ready to submit to VLA for investigation and diagnosis of cause. Only by knowing the cause can we hope to reduce losses.
- **DO NOT** foster ewe lambs which potentially could be kept as replacements onto aborted ewes - there is a high chance of the cause of abortion spreading to ewe lambs and causing abortion the following year.
- **DO NOT** keep surviving ewe lambs for breeding from aborted ewes/ewes suspected of having Toxoplasma (i.e. those which also had mummified or poor quality dead lambs.)
- Use new Electronic Identification Tagging to your advantage - record abortions from individual ewes and refer back to this information when making culling decisions in the future.
- If you have suffered greater than 3% of your flock aborting you definitely need to investigate the cause as losses can escalate the following year again. There are schemes available such as FlockCheck from Intervet/Schering Plough which is a FREE diagnostic service to test the flock for enzootic abortion/toxoplasmosis.

Ask your Vet for more information.





Veterinary Surgeon **Jemma Reed**

XLVets Practice **Paragon Veterinary Group, Cumbria**



Calf health has been dramatically improved at Dobcross Hall Farm following an holistic approach to pneumonia control.

Herd Health

Respiratory Disease

Paragon Veterinary Group's David Black, as part of his routine fortnightly visits, has regular discussions with Peter and Alison Holliday and their sons Ian and Alistair at Dobcross Hall, Gaitsgill, Carlisle, about general herd health which was already running at a high level.

However, over the past one to two years young calves have had issues with coughing and pneumonia as well as the occasional joint problem and ear infection, resulting in growth rate setback and the odd calf death. Paragon vet Jemma Reed encouraged the Hollidays to take advantage of the RDPE Northwest Livestock Programme Animal Health and Welfare Project.

The programme subsidised the cost of testing so calves were blood sampled to investigate the cause of the problem and tests pinpointed Mycoplasma as the cause.

Previously, the calves were receiving multiple treatments, and Jemma chose a different antibiotic (Draxxin) to tackle the bacteria, which is unusual in that it doesn't have a cell wall, as well as an anti-inflammatory (Metacam).

'There is no vaccination for this particular bug as a preventative measure so key to controlling it is management,' said Jemma. 'It can be present in the cows' milk but it can also spread from calf to calf. So we looked at the wider picture.'

First to be looked at was the level of maternal antibodies received through colostrum by calves in their first week of life.

'We thought our colostrum transfer level was fine - the calves were getting six pints of their mother's colostrum in six hours,' said Ian. 'However, we learned that they should receive seven per cent of their body weight within six hours of birth and 10 per cent in 12 hours. For the calf to get the volume needed, it would have to suckle for 20 minutes. We started tubing the calves twice within the first six to 12 hours to give them the required amount of colostrum,' he added.

Subsequent tests showed that the new system was providing good levels of maternal transfer of antibodies. The Hollidays also discussed their method of rearing the calves and decided

to change from bucket rearing to a two station calf feeding machine in March (2010).

'By allowing controlled but regular access to milk replacer, calf machines are a much more natural method of feeding, but producers must pay real attention to both hygiene and management and the result will be much better growth rates,' said Jemma.

Now calves drink up to a maximum of 7.2 litres a day compared with the 4.5 litres on the bucket system with activity monitored by the machine's computer. Improvements in overall health have been significant say the Hollidays and this should help them in their aim to calve heifers at two years old or younger.



By being ultra hygienic and cleaning the machine twice a day, intakes have been increased by a further 10 per cent. While the time spent filling and cleaning the machine is similar to the old bucket rearing method, it can more easily fit in with other work on the farm throughout the day.

Calves are gradually and automatically weaned off the machine within 60 days. Also new to the calf management is maintaining the same animals in groups of up to 10, even after weaning, to help reduce stressful social changes.

A new extension has been built onto the existing calf shed at a cost of £12,000 to house the weaned calves for up to two months prior to turning out. Previously after weaning they were turned into the same building as older youngstock.

Further investments of £6,000 were made, with grant aid, in improving ventilation to the original and new building extension with an Arntjen curtain system, replacing Yorkshire boarding. It is operated with separate weather stations on either side of the building to control air flow above the calves.

'With the help of our vets we are continually trying to improve all areas of performance within the herd,' said Peter.

'It costs well over £1,000 to get a heifer to calving which we are currently averaging at 25 months. As a result of the changes made, we are spending less; our antibiotic usage alone has reduced by half, and we are getting a healthier animal which we may be able to calve even earlier and also should have a more productive lifetime,' he added.



The new two-station calf feeding machine



Jemma Reed, Ian Holliday and David Black

FARM FACTS AT DOBCROSS HALL FARM

- Peter and Alison Holliday and sons Ian and Alistair
- 410 acres, mostly rented from the Church Commissioners
- 100 acres of winter and spring barley and winter wheat, whole-cropped and crimped
- Holdale closed pedigree Holstein herd of 220 milkers, calving year-round, plus 200 youngstock
- Milk sold to Meadow Foods averages 9,600 litres a cow



ADVICE! AVOIDING CALF PNEUMONIA

- Do not mix groups of animals with varying levels of immunity - mixing also increases stress
- Minimise pathogen challenge by improving housing and ventilation
- Maximise colostrum quality and quantity to ensure antibodies get from mother to calf
- Watch out for other diseases which compromise the immune system
- Poor nutrition, from inadequate milk intake to vitamin deficiencies, can have an effect
- Avoid multiple procedures at the same time (weaning, disbudding etc) to reduce risk
- Monitor environmental temperature changes - damp to cold and dry - which increases risk
- Do not overstock, preventing air circulating and increasing infection pressure from bugs
- Groups above 20 animals significantly increase risk
- Keep bedding fresh and dry to help with air quality



MARCO WINTERS

The current Profitable Lifetime Index (PLI) represents the culmination of years of research and the interrogation of millions of cow records. Marco Winters, DairyCo head of genetics explains why it was considered important to invest in this index and where it will take the UK dairy cow population.



problems to correct, who may wish to use PLI as their first screening tool and then focus on a secondary trait which is important to their particular situation.

But we can confidently say that if the country as a whole followed the PLI breeding route, the national cow population as a whole would steadily begin to reduce the recent decline in dairy cow fertility and make improvements in each of the other traits in the index. And since genetic improvement is cumulative, significant improvements can be built up over the generations.

*Records analysed in the process of creating PLI are obtained from the milk records organisations (NMR, CIS and UDF), and the dairy cattle breed societies.

PLI: what's behind it and what lies ahead!

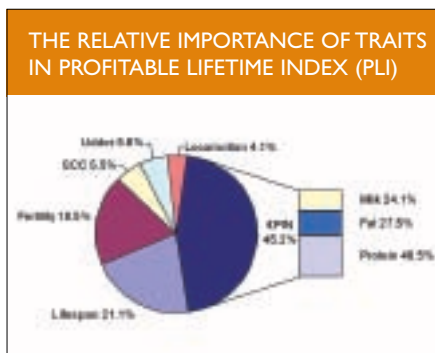
Developing a national breeding index for the UK dairy industry has been a cornerstone of the DairyCo **breeding+** research strategy for several years.

It has always been considered important that such an index would represent the economic benefits a dairy cow could bring to a business, while also addressing the need for better health, fitness and welfare standards to which both farmers and consumers aspire. To this end, funding has been directed to both SAC and Edinburgh University, who have analysed millions of cow records* and assessed the relative importance of different traits under a variety of possible economic conditions.

The outcome of this work and the economic assumptions that were made were then considered by an industry group, on which breed societies, milk recording organisations, the AI industry, the milk processing industry and many practising dairy farmers were all represented. And the final result of all the discussions was the development of an index in which each trait is included in line with our best estimate of its ongoing economic importance. That index is the current Profitable Lifetime Index (PLI).

This PLI is a revision of previous formulae for the index, but, for the first time, represents the financial improvement an animal is, on average, predicted to pass on to its offspring over its lifetime, rather than for a single lactation.

As with the previous PLI, it still has strong emphasis on production - retaining 45 percent of its emphasis on the milk, fat and protein traits - but now includes a 55 percent emphasis on a variety of fitness traits. The particular traits included are those which have been proven to be most strongly associated with the cow's lifetime profitability, full details of which are given in the Pie Chart.



Since the launch of the current index in 2007, we at DairyCo **breeding+** have been encouraged and reassured by how positively it has been received throughout the dairy industry. Many leading breeders and commercially successful dairy farmers have strongly endorsed the index and we have been able to vindicate their confidence with some encouraging results, including genetic improvement across the national herd in many of PLI's component traits.

Similarly, when we analyse the actual performance on the farm of animals with different indexes, we can clearly see that the genetic prediction is accurately pinpointing the best animals.

This has been seen in some recent research undertaken by DairyCo **breeding+** which shows that daughters of bulls with high Lifespan indexes (positive scores) live considerably longer than daughters of bulls with low Lifespan indexes (negative scores). The same relationship between the genetic predictions and daughter performance has also proven to be the case when other components of PLI are looked at individually.

Naturally, we don't expect every single dairy farmer in the UK to religiously select their AI sires for PLI, although we would highly recommend that it was the first selection goal. We know there will be farmers with specific

KEY FACTS ABOUT PLI

- The current formula was introduced in August 2007.
- 45% of the index is based on milk production (milk, fat and protein).
- 55% of the index is based on health, welfare and fitness traits.
- £ value represents improved potential profitability over a daughter's lifetime.
- Top bulls have PLIs of over £200.
- Daughters of top bulls will earn around £200 more than average daughters.
- This is worth £30,000 for a 150 cow herd.
- The improvements build up over the generations.

HOW TO USE PLI

Use the highest PLI bull you can without compromising on any of the other traits you wish to address. Try to select from the top 50 percent available, with PLIs of £70 or more.

HOW TO CHECK A BULL'S PLI

PLIs are always available on the DairyCo **breeding+** website at:

www.dairyco.org.uk

Here, it is also possible to re-rank the top PLI lists to highlight the best bulls for individual traits such as production, fertility, lifespan or cell counts.

Committed to the future of
UK agriculture

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**XLVETS
PULL OUT
SPECIAL**



		608 Vet Group Solihull, West Midlands Telephone: 0121 7053044
		Allen and Partners Whitland, Carmarthenshire Telephone: 01994 240318
		Alnorthumbria Veterinary Group Alnwick, Northumberland Telephone: 01665 510999
		Ardene House Veterinary Practice Aberdeen, Grampian Telephone: 01224 740700
		Armour Veterinary Centre Mauchline, Ayrshire Telephone: 01290 550200
		Belmont Veterinary Centre Hereford, Herefordshire Telephone: 01432 370155
		Bishopton Veterinary Group Ripon, North Yorkshire Telephone: 01765 602396
		Cain Veterinary Centre Llansantffraid, Powys Telephone: 01691 828205
		Calweton Veterinary Group Callington, Cornwall Telephone: 01579 383231
		Castle Veterinary Surgeons Barnard Castle, Durham Telephone: 01833 695695
		Capontree Veterinary Centre Brampton, Cumbria Telephone: 016977 2318
		Chapelfield Veterinary Partnership Norwich, Norfolk Telephone: 01508 530686
		Cliffe Veterinary Group Lewes, East Sussex Telephone: 01273 473232
		Clyde Veterinary Group Lanark, Lanarkshire Telephone: 01555 660000
		Drove Veterinary Hospital Swindon, Wiltshire Telephone: 01793 522483
		Endell Veterinary Group Salisbury, Wiltshire Telephone: 01722 333291
		Farm First Veterinary Services Abergavenny, Gwent Telephone: 01873 840167
		Farm Veterinary Solutions Uppingham, Rutland Telephone: 01572 822399
		Fenwold Veterinary Centre Spilsby, Lincolnshire Telephone: 01790 752227
		Friars Moor Veterinary Clinic Sturminster Newton, Dorset Telephone: 01258 472314
		Glenthorne Veterinary Group Uttoxeter, Staffordshire Telephone: 01889 562164

EXCELLENCE IN PRACTICE

XLVets - We Excel

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

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





Hook Norton Veterinary Surgeons Banbury, Oxfordshire Telephone: 01608 730085			Minster Veterinary Practice York, North Yorkshire Telephone: 01904 643997		
Kingfisher Veterinary Practice Crewkerne, Somerset Telephone: 01460 77790			Northvet Veterinary Group Kirkwall, Orkney Telephone: 01856 873403		
Kingsway Veterinary Group Skipton, North Yorkshire Telephone: 01756 793224			Paragon Veterinary Group Carlisle, Cumbria Telephone: 01228 710208		
Lambert, Leonard & May Nantwich, Cheshire Telephone: 01948 663000			Parklands Veterinary Group Cookstown, Northern Ireland Telephone: 028 867 65765		
Larkmead Veterinary Group Wallingford, Oxfordshire Telephone: 01491 651479			PAWS Veterinary Health Centre Nuneaton, Warwickshire Telephone: 02476 384064		
Macpherson O'Sullivan Ltd Shrewsbury, Shropshire Telephone: 01743 860920			Penbode Veterinary Group Holsworthy, Devon Telephone: 01409 253418		
Millcroft Veterinary Group Cockermouth, Cumbria Telephone: 01900 826666			Rosevean Veterinary Practice Penzance, Cornwall Telephone: 01736 362215		
			Scarsdale Veterinary Group Derby, Derbyshire Telephone: 01332 345191		
			Scott Mitchell Associates Hexham, Northumberland Telephone: 01434 608999		
			Shepton Veterinary Group Shepton Mallet, Somerset Telephone: 01749 341761		
			Southfield Veterinary Centre Dorchester, Dorset Telephone: 01305 262913		
			St Boniface Veterinary Clinic Crediton, Exeter Telephone: 01363 772860		
			Synergy Farm Health Ltd Evershot, Dorset Telephone: 01935 83682		
			Thrums Veterinary Group Kirriemuir, Angus Telephone: 01575 572643		
			Tyndale Farm Veterinary Practice Berkeley, Gloucester Telephone: 01453 511311		
			Wensum Valley Veterinary Surgeons Fakenham, Norfolk Telephone: 01328 864444		
			Westmorland Veterinary Group Kendal, Cumbria Telephone: 01539 722692		
			Willows Veterinary Group Northwich, Cheshire Telephone: 01606 723200		
			Wright & Morten Macclesfield, Cheshire Telephone: 01625 501500		

XLVets is a group of 46 independently owned, progressive veterinary practices, all committed to the future of the UK livestock industry. Spanning the length and breadth of the UK, we work together, sharing experience, knowledge and skills in order to define and deliver the highest standards of veterinary practice, animal health and productivity.

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

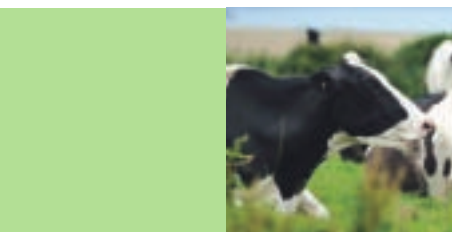
Founded in 2005, XLVets originated from a group of dynamic farm animal veterinary practices, who worked hard to create what they saw as a model of how individual practices can work successfully in partnership. Following a period of rapid growth, XLVets is now becoming recognised nationally as a 'quality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

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

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

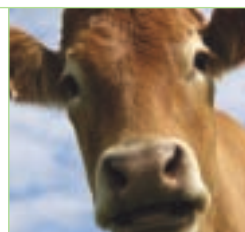
For farm clients of XLVets member practices this gives local access to many of the unique national initiatives the group develops; from health management, consultancy advice and disease prevention, through to bespoke analytical services to improve farm productivity and financial returns.

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



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

XLVets is committed to being a part of this healthy future.



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For further information on XLVets and its member practices please contact the XLVets office on (01228) 711788 or e-mail admin@xlvets.co.uk

DR ELIZABETH BERRY

Dr Elizabeth Berry, DairyCo research and development manager, looks at the outcomes of a DairyCo and EBLEX jointly funded study on Control of Worms Sustainability (COWS).



problem in other countries where grazing is practised.

Anthelmintic resistance is one of the reasons for apparent anthelmintic inefficiency, but other reasons include:

- **Dosing with insufficient anthelmintic due to:**
 - underestimation of the animal's weight;
 - poorly maintained dosing equipment.
- **Failure to follow the manufacturer's instructions by:**
 - not storing the products correctly;
 - using products beyond their use-by date;
 - applying products incorrectly, or under adverse weather conditions (pour-ons);
 - mixing anthelmintics with other products.
- Rapid re-infection of animals after treatment from highly infective pastures;
- Use of the incorrect drug for the target worms.

The COWS project looked at the different worm challenges and issues faced by spring calving dairy herds, autumn calving dairy herds and all year round calvers.

As well as giving guidelines for the use of anthelmintics (wormers) and worm control in cattle, the research also highlights the particular risks and features of worm control in different dairy systems and suggests appropriate methods of control.

The following guidelines are recommended and these are based on the successful Sustainable Control of Parasites in Sheep that is used as the industry standard in the UK.

Controlling Anthelmintic Resistance in Cattle



wide variety of clinical signs depending on the species involved but all cause general loss in production, decrease in fertility and poor growth rates.

In comparison with the sheep industry, there have been few reported episodes in the published literature on anthelmintic resistance in the bovine. Surveillance data from various sources indicate that *Ostertagi osteragi*, the main parasite associated with disease, and *Cooperia* spp. are very common in young cattle in their first grazing season and the main contributor to faecal worm egg counts particularly where treatment failures are suspected.

Dictyocaulis viviparus has been increasingly reported in first year grazing calves. Infections due to *Fasciola hepatica* may cause a loss in production in milking cows during the winter and can be clinically difficult to detect. The areas where fluke have been diagnosed are increasing in the UK and this may be a

This project was supported by RUMA (Responsible Use of Medicines in Agriculture Alliance) and NOAH (National Office of Animal Health). Endoparasites can cause a

Guideline	Comment
Work out a control strategy with your veterinarian or adviser.	Health planning using specialist knowledge and ongoing consultation.
Use effective quarantine strategies to prevent the importation of resistant worms in newly purchased cattle.	Cattle bought into the herd can be a potential source of introducing resistant alleles into a herd.
Test for anthelmintic efficacy on your farm.	While resistance is still rare in cattle nematodes, treatment failures do occur. It is important to monitor efficacy as underdosing can select for anthelmintic resistance.
Administer anthelmintics effectively.	Administer the right dose in the correct way following manufacturers' instructions.
Use anthelmintics only when necessary.	There will be a 'trade off' between tolerating a certain level of parasitism and minimising selection for anthelmintic resistance. Faecal egg count monitoring has an important role.
Select the appropriate anthelmintic for the task.	Consider narrow spectrum treatments whenever possible, use rotation of wormer families in appropriate ways.
Adopt strategies to preserve susceptible worms on the farm.	Aim to reduce heavy selection for anthelmintic resistance when treating adult cattle, immune older animals or when dosing on low contamination pastures.
Reduce dependence on anthelmintics.	Alternative control measures include grazing management using sheep or older immune animals.



Quarantine treatments

These should be on a risk based approach taking into account where the new animals have come from in respect of fluke areas and previous treatments. Pasture can be split into high, medium or low risk according to previous grazing management.



Time of year	High risk for worm infestation	Medium risk for worm infestation	Low risk for worm infestation
Spring	Grazed in the previous year by first year calves.	Grazed in the previous year by adult or second year cattle.	Newly reseeded as either grass or forage crops. Previously grazed by sheep or been in conservation management.
Mid July onwards	Previously grazed in the spring by first year calves.	Previously grazed in spring by cattle. 'Clean' pasture grazed by parasite free calves.	Previously grazed by sheep in the spring. Previously been in conservation management or forage crops of arable by-products.

For those systems that use grazing as part of their management they can generally be split into three types : those where cows predominantly calve in the spring, those who calve in the autumn, and those where calving occurs all year round. Generally in all systems, calves are removed from their dams either at birth or soon after birth.

System	Features/risks	Implications for control
Spring calving herds	<p>Adult cattle usually immune but may be sub-clinical production effects on high producing animals.</p> <p>Calves turned out in spring may experience infections from overwintering of worms and larvae on pasture and show clinical signs of infection.</p> <p>Calves grazing the same pasture as older calves and cows become exposed to high worm burdens from mid July onwards.</p> <p>Housed calves may acquire significant infection early in the next spring.</p>	<p>Monitor and treat if appropriate or considered necessary.</p> <p>Turn out calves on to low risk pastures and minimise pasture contamination using timed treatments with appropriate wormers. Use lungworm vaccination in high risk areas.</p> <p>Monitor using faecal egg counts and treat where necessary or move on to low risk pasture from mid July onwards.</p> <p>Turn out calves on to low risk pasture. Treat in early part of grazing season to minimise pasture contamination. Lungworm vaccination in high risk areas.</p>
All year round calving herds	<p>Calves born in the spring may be put on pasture at two to three months of age or as a year old the following spring.</p> <p>Calves born in late summer or autumn may not graze until the following spring.</p>	<p>Monitor using faecal egg counts and preventative control measures where necessary.</p> <p>Alternatively move to low or moderate risk pasture in the spring.</p>
Autumn calving herds	<p>Calves grazing the same pastures as older calves become exposed to higher worm burdens from mid July onwards.</p>	<p>Monitor using faecal egg counts and treat where necessary or move on to low risk pasture from mid July onwards.</p> <p>Treat for possible arrested worm development on housing in the autumn.</p>

You can download the **COWS report** from the DairyCo website and a factsheet summarising the main points for farmer use will be available from mid-summer.



PULL OUT & KEEP

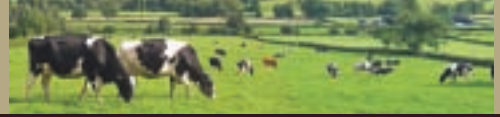


03 Mastitis Control

Peter Edmondson Shepton Veterinary Group

Mastitis is a major concern amongst dairy farmers in the UK. Follow our top ten tips to minimise environmental mastitis on your farm and increase milk quality.





TOP TEN TIPS

To minimise Environmental Mastitis on your farm

TIP 1	CLEAN, DRY BEDS	Keep cows on clean, dry beds. If the cows look dirty, the beds are not clean enough.
TIP 2	DRY BEDDING	Always use dry bedding, this absorbs maximum moisture and does not get mouldy or damp. Scrape passageways twice daily.
TIP 3	CALVING PENS	Pay particular attention to the calving pens. These must be kept as clean as possible as freshly calved cows are most prone to toxic mastitis.
TIP 4	CUBICLE SIZE	Have a minimum of one cubicle per cow (ideally 5% more cubicles than cows). If on straw yards, allow at least 6.5 sq metres of lying space, bed up daily with clean dry straw and clean out every 2 weeks.
TIP 5	PRE-DIP COWS	Pre-dip cows to disinfect teats prior to milking. Teats must be dried. You may decide only to pre-dip the high yielder or problem group. If the milk sock is dirty after milking, teat preparation is not good enough.
TIP 6	STANDING TIME	Make sure that cows remain standing for 30 minutes after every milking.
TIP 7	VACUUM LEVELS	Make sure that you have stable vacuum levels throughout milking, you should not have any liner slip and the regulator must always be leaking in air. Have the machine regularly serviced and have a dynamic machine test carried out every year.
TIP 8	TEAT ENDS	Check teat end conditions. If the teats are damaged then there is an increased risk of mastitis as the teat end is the barrier which keeps bugs out of the udder.
TIP 9	ORBESEAL	Use Orbesal with dry cow therapy ensuring excellent hygiene prior to infusion. Pinch the teat half way up and infuse the Orbesal so it sits at the base of the teat.
TIP 10	MONITOR PROGRESS	Monitor progress with your vets. Check on your mastitis incidence and timings of infection. Use bacteriology tests to identify the cause of clinical mastitis on your farm.

- Cell count and milk quality control
- Milking technologies/Robotic milking
- Milking routines and parlour hygiene



Precaution is better than cure

Be proactive - not reactive - towards safety...

XLVets Sterimatic Packs...

The XLVets Sterimatic needle protector and cleaning system provides ultimate operator safety along with a sterile system for multi-dose injections.

The XLVets Sterimatic system has many aspects which are extremely beneficial for both the user and livestock. These include protecting the needle from damage, whilst reducing infection and abscessing. It also reduces the chances of cross-infection of disease between livestock and most importantly reduces the risk of self-injection.

The Sterimatic system comprises of two parts; a sleeve which protects the needle to help prevent self-injection and keep the needle clean and a



'Stericap' which swabs the needle with disinfectant before and after injecting each animal.

The Stericap is proven to be effective against many viral and bacterial contaminants including; Foot and Mouth disease, Bluetongue, Staphylococcus, E.Coli and PRRSv.

The XLVets Sterimatic sleeve is compatible with most plastic multi-dose syringes. Each pack contains 1 sleeve, 5 Stericaps and 5 needles. Refill packs are also available. To order contact your XLVets practice.

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XLVets Product. For more information and products please refer to the XLVets Livestock Catalogue.

For further information on XLVets and its member practices please contact the XLVets office on (01228) 711788 or e-mail admin@xlvets.co.uk.

www.xlvets.co.uk



Installing robotic milkers changed herd health and production as well as lifestyles...

When Dorset dairy farmer Alan Perrett took over the responsibility of milking at Park Farm, he totally revised the system, investing in two Lely robotic milkers, to free up his time. This also required some major changes to be made to the cow housing and buildings layout, and a new strategy on herd management. Friars Moor vet Julian Allen advised Alan and worked with him to ensure that herd health, not just his lifestyle, also improved.



Controlling lameness

Julian says: 'Under the old straw yard housing system, lameness had not been a major problem. But we anticipated that moving cows into cubicles at the same time as training them to use the robots would lead to increased standing times and, consequently, foot problems.'

'We devised a lameness control plan, and cows were given six weeks to get used to the cubicles before robotic milking commenced.' (See opposite). 'This helped reduce the problem to some degree, but lameness became the principal health challenge at Park Farm in the months after the change,' says Julian. 'Some older cows were slow to adapt to cubicles, leading to long standing times and sole ulcers. But locomotion scoring has shown that young cows now entering the system are accepting the cubicles and foot health is good.'

Although Julian recommended sand as the first choice bedding material in the cubicles, for mastitis prevention, Alan was concerned about the wear and tear on machinery and

At Park Farm, near Blandford Forum, in Dorset, Alan and his father Andrew, run a 130-cow flying herd, with heifer replacements now coming through. Alan explains: 'We've no opportunities to diversify here at Park Farm so must stay focused on dairying. But although I do like my cows, I just didn't want the tie of milking them.'

Alan and Julian had already taken steps to improve cow health through a herd health planning scheme with the Wessex Positive Health Group, and vaccination programmes for BVD, IBR and leptospirosis were already in place.

Julian explains: 'To take full advantage of the investment in the robotic system, changes to the whole management of the herd were required. Instead of running a flying herd, heifer replacements are now being reared. This is because it's easier to train heifers on to the robotic milker than older cows, and it's also more beneficial for herd health.'

'For a robotic milking system to be successful, buildings and facilities need to be arranged so that cows can move easily between the robots, feed, grazing, water, and lying and loafing areas. So new cow accommodation was required and this was an opportunity to switch from straw yards to cubicles.'



Veterinary Surgeon **Julian Allen**
XLVets Practice **Friars Moor, Dorset**



managing the sand/slurry lagoons. So instead he opted for good quality cow mattresses with sawdust: muck is scraped off them twice a day and sawdust replaced as needed. Julian adds: 'Cow environment has certainly improved over the straw yards. Alan is meticulous about keeping cubicle beds clean and dry.'



LAMENESS CONTROL PLAN

- A comfortable cubicle to encourage adequate lying times - comfortable lying surface (Wilson Pasture MAT), uninterrupted forward lunging space, high neck rail, brisket locator to position the cow correctly in the cubicle, etc.
- Wide passageways and cross passages for good cow flow.
- Rubber flooring in feed passage.
- Two footbaths at exits from robots.
- Footbath for dry cows and heifers.
- Cubicle training for heifers.
- Early detection and treatment of lame cows.
- Regular foot trimming.
- New box scraper to improve slurry management and keep cows' feet dry and cleaner.

Controlling mastitis

The change in housing has helped reduce mastitis cases. 'Mastitis used to be the principal health issue on the farm,' explains Julian. 'This was mainly due to the straw yard housing and the purchase of some cows with pre-existing udder health problems.'

'The robotic milkers have also had a positive impact - each quarter is milked separately, and clusters are disinfected in-between animals.'

Alan spends at least 10 minutes each day going through the robot computer's data readouts. These provide information on milk conductivity and cell count readings taken from each quarter at each milking, and so identify potential problem cows.

Julian adds: 'Using these readings, milk bacteriology samples from clinical cases and high cell count cows can be taken to identify the pathogens involved. We can then select appropriate treatment to control mastitis, or in some cases make culling decisions.'

Since the change to robotic milking, there has been a dramatic reduction in clinical case rate: from over 100 quarter cases/100 cows/yr under the old conventional system down to just 16 quarter cases/100cows/yr in the first 12 months with the robotic milkers.

Julian adds: 'Based on a conservative estimate of £100 for a clinical mastitis case, that's a saving of £12,900.'

Herd nutrition

In the past Alan has struggled to get the right nutritional feed inputs that he wanted for his herd, but has always valued Julian's unbiased advice. 'After all,' says Alan, 'Julian is also interested in cow health. I've got the

right nutritionist involved now and we meet regularly with Julian to discuss the herd.'

The transponders on the cows enable them to be rationed individually according to yield. Cows are currently averaging a production of 33litres of milk sold, and making an average of three visits a day to be milked. Fresh calves come in for milking four times a day, and stale cows less.

Julian adds: 'One noticeable change is that the body condition score across the herd has become very even - with few cows at the extremes. The robot automatically weighs cows at each milking so it is easy to monitor BCS changes.'

'On average cows in the herd lose around 30kg of body weight after calving, equivalent to 0.5 of a body condition score, with the lowest weight reached at about 25 days into lactation. Cows regain their post calving weight at about 120 days. This shows the negative energy balance is well controlled in the herd - and will be a principal reason that the herd enjoys good fertility.'

Improved fertility

Julian routinely visits the farm every month to carry out fertility checks, he says: 'As is often the case, fertility has improved as a result of improvements in other areas of cow health and cow comfort - especially transition cow management, body condition score and lameness and mastitis management.'

'The activity meters also help Alan with heat detection and the robot provides a daily list of potential bulling cows. The current average days in milk is 163 days, which is very good for an all-year round calving herd, and calving index is around 385 days.'

ROBOTIC MILKERS, OVERALL SUCCESS

Both Alan and Julian agree that the robotic milking system has made the herd quieter and calmer.

Health improvements are also evident. As a consequence of the new system - robotic milkers, cubicles, fewer bought-in milking cows - mastitis incidence has significantly reduced and herd fertility is excellent. A close eye is kept on lameness.

Alan adds: 'Robotic milking is not for everyone, but it works well here, and frees up my time for other things.'

'Vets' roles are changing, they are no longer just there to pull out big calves. These days, they sit down with you and discuss your herd targets and problems. They are also your eyes and ears for new products and developments - I don't have the time to learn about these, but I know Julian will always tell me about anything that would be of benefit to my herd.'





Sophie Throup FarmSkills Manager

FarmSkills

GROWING FARM BUSINESS SUCCESS

HAPPY BIRTHDAY

One Year On...

Since its launch one year ago, FarmSkills has come a long way and has delivered small group workshops for farmers across the length and breadth of Britain. Training has taken place on farm and in veterinary practices and in all cases, has helped grow farm business needs through learning what farmers need from a course and using the skills and expertise of the vets involved to deliver the teaching of the highest quality.

Stars of the show have been our DIY AI courses, closely followed by training on foot trimming and practical lambing. Courses on calf rearing, staff management, first aid for farmers and buying the right beef bull have also proved popular choices – we're looking forward to growing bigger and better in our second year.

FarmSkills Statistics:

Over **1,100 farmers** have attended a FarmSkills workshop in the last year.

Over **45 vets** have gone through the LANTRA Awards 5 day Instructional Techniques programme, helping raise the standard of training delivery. A further 40 vets have studied the 2 day programme.

WE HAVE ALSO...

- Been to over 80 farms and auction marts to host workshops and parts of training days - thank you to all our host farmers - we really appreciate your support.
- Have used more than 900 cows to practise foot trimming and DIY AI on.
- Seen over 100 lambs born (or their simulated equivalents!).
- Eaten over 2,500 sandwiches.
- And used approximately 13,000 pairs of rubber gloves!



STOP PRESS NEWS

FarmSkills announce a new programme of training...

Although the majority of the FarmSkills workshops we run will continue to be one-off demanded workshops, a growing group of farmers have asked for a qualification to go with the courses they attend.

We're delighted to announce a new programme of training, delivered in association with Harper Adams University College, which will enable farmers who take up the challenge to study for a Foundation Diploma in FarmSkills Dairy

Management, accredited by Harper Adams. The new programme will be available from September 2010.

Please contact the FarmSkills team on 07748 805497 to find out more.



...AND TAKE UP THE FARMSKILLS CHALLENGE!

XLVets will be exhibiting at the Dairy Event and Livestock Show again this year. On the 7th and 8th September, we'll be on stand 285 in the Animal Health section at the NEC - we'd love to see you there.

This year, we're issuing the FarmSkills Challenge – brush up your skills on tubing an udder, injecting stock and taking a clean milk sample. All mini training sessions will be led by vets and will also have a FarmSkills 'Pull out and keep' guide to take away to help you remember what you've learned!

Plus - as it's our first birthday!!

There'll be fun games available, and prizes for everyone who takes part in our challenges. So why not come and help us celebrate and let us know how we can help grow your farm business through FarmSkills.

FarmSkills at:
**DAIRY EVENT
 & LIVESTOCK SHOW**
 7TH - 8TH SEPTEMBER 2010
 NEC, BIRMINGHAM



Winter in New Zealand (or The New Zealand Dry Period?)



Amy Avery Endell Veterinary Group

My last few months here in New Zealand have been fairly quiet as the majority of cows are dry from mid-May to mid-July. Whilst cows are dry usually they are grazed off the farm on someone else's land. We call these people 'graziers' and they also are often responsible for checking the cows on a daily basis and measuring out the breaks of feed. This allows the sharemilkers and managers a proper break before the spring rush with time to get on top of repair and maintenance jobs. My husband and I have certainly made the most of the time, spending every weekend either hiking in the southern alps or skiing on the local mountain!

Timing of dry-off depends mainly on grass growth or lack of it! This year we had a lot of rain, non-stop for several days, at the end of May which forced quite a few people to dry off early despite the dirty conditions. Following dry off, many cows are wintered on forage crops plus/minus silage, hay and straw. Forage brassica, such as kale, is most commonly used. People really like it because it produces a very large tonnage of dry matter per unit area (12tDM/ha) which means almost three times the number of cows can be grazed on one area compared with pasture. In Canterbury this is especially important as there is such a high concentration of cows in one area. Brassicas are also liked because they keep well into the winter without losing any quality or quantity. Despite these advantages, unfortunately feeding brassicas isn't without problems. Feeding can result in rumen acidosis, bloat, nitrate toxicity and trace element imbalances, to name just a few.

Brassicas are high in sugar and low in fibre, which leaves animals eating them susceptible to rumen acidosis. You have probably seen acidosis in cows fed on high grain diets, some will do poorly and some have diarrhoea. It can also result in gaseous bloat much like we see in cattle that have gorged themselves on grain. Feeding frosted crop seems to be especially high risk so we encourage farmers to wait until midday, when things have warmed up, before feeding a new break. Feeding a fibre source such as straw alongside also helps. Many brassica species also develop high levels of nitrates. Poisoned cows are usually found dead or are weak and have extremely laboured breathing because the nitrate effectively causes the animals' blood cells to be starved of oxygen. Most farmers will

nitrate test before a new break is fed which can reduce the chance of a problem occurring. Other problems we see when feeding brassicas are Rape & Kale poisoning (red water) and Choke.

All the risks associated with feeding brassicas can be reduced with a few simple rules. They never should be fed as 100% of the diet, and they should be introduced

slowly as the cows are dried off. It is usually fed as a break, so by making sure cows are full already when given a new break can reduce the chances of bloat and nitrate toxicity. Transition cows (3 weeks off calving) should not be fed brassicas. They have very high calcium content and are low in phosphorus and magnesium, and as such many milk fevers will arise if this is done. Plus it does not mimic their lactating diet at all.



One other winter forage that has become a very popular feed lately is fodder beet. This also can cause the problems mentioned above but additionally the roots are extremely high sugar and low fibre, leaving animals at an even higher risk of acidosis and milk fever. Oxalates are also present in fodder beet; these bind calcium in the gut. This means that whilst feeding fodder beet cows are susceptible to milk fever even before they calve.

One important job at the end of lactation that we as vets get involved with is assessing trace element statuses. Trace element supplementation of grazing animals in New Zealand has produced marked improvements in productivity of sheep, beef and dairy cattle. However they cannot be given indiscriminately as this may result in death of the animal and/or unacceptable levels in the livers and kidneys for human consumption. The patterns of deficiency are pretty unpredictable across Canterbury and where soil types are the same, differences can still occur. So each year as they approach dry off most farms sample a selection of animals to see where their levels are.

22 'essential' trace elements or minerals are required by cows but the main ones we are concerned with in New Zealand are copper, selenium, cobalt, iodine and occasionally zinc, manganese and chromium. As soil levels are poorly correlated with the mineral content of forages the most accurate assessment of mineral status is done by taking liver biopsies and blood samples. The liver is much more accurate for assessing copper levels than blood. This is because when copper intake is below requirements, the animal will use its liver store to maintain its blood level within the normal range, so blood levels can appear normal even when the liver copper is severely depleted. Usually we select about 6 cows, with this number biopsies can be done in about an hour and a half in a rotary parlour. Liver biopsy is relatively uncomplicated and is the most accurate way of sampling for trace elements. Some people get liver samples tested from cull cows at the abattoir however normally we don't recommend this as culls often do not fully represent the true status of the herd.

If a herd is deficient in one of the trace elements it may be supplemented accordingly. There are several different oral and injectable products on the market. Many people here use dosatron injectors which supply the minerals in measured amounts through the drinking water.

This is also an important time of year for mastitis control. This is because cows with infections have a higher chance of being cured in the dry period than in lactation.



Taking a liver biopsy

It is also a crucial time with regard to preventing new infections occurring in the next lactation. As you can imagine when farmers are drying off a thousand cows over two or three days it can be very tempting to take short cuts with dry cow therapy. However, as you are probably aware, injecting dry cow tubes up dirty teats can cause a lot more problems later on or even cause mastitis during the dry period.

A relatively new practice in New Zealand is using teat seal on heifers from about 4-6 weeks before calving. Data from New Zealand farms show that heifers here have the highest age-specific incidence of clinical mastitis of all cows, with the largest majority of cases being diagnosed in the first 2-3 weeks of lactation. Most cases are caused by *Strep. uberis*. Studies have shown that using teat seal in heifers reduces clinical mastitis so much that any herds that have an incidence of heifer mastitis over 13% should see a cost benefit. As such many have taken up using teat seal. You might be surprised to hear we manage to do this in both rotary and herringbone systems with hardly ever getting kicked. Most seem so surprised at their surroundings the first time they come in they stand stock still! The hardest part usually is bringing them into the parlour, especially if they are not used to being handled. Obviously it is absolutely crucial the teats are fully clean and sterilised as the potential for introducing a bug would be very high otherwise and the consequences disastrous. But despite it being a tricky job the benefit is very obvious and

almost everyone who has done it once before did it again this year.

The other big news over here is that in the last month new rules have come out regarding inductions. As I said in my last article, inductions are used over here in order to tighten calving patterns and reduce cow wastage. However, with growing concern about the welfare of this, new targets and an operational plan have been set. By 2012 the maximum level of inductions undertaken in individual herds will be dropped from 15% to 4%. This is different to previous targets because they are now set at an individual farm level rather than a national level. For some of our herds, especially the large ones which have relied on inductions, this will mean changes will have to be made with regard to managing the calving spread and it will be interesting to see how different farms manage this.





XLVets New Zealand Dairy Scholarship 2009/10



Joe Davis XLVets New Zealand scholar

In this issue we feature the first of two reports from Joe Davis on his experience in New Zealand. Here, Joe gives us an insight to farming in Southland and the practice where he worked.

I have been a practising vet since 2001 and last year I was in the fortunate position of receiving one of the XLVets New Zealand dairy scholarships. My placement was at the VetSouth clinic in Gore, Southland.

The only thing separating Southland from the Antarctic is a barbed wire fence, according to many New Zealanders, and when the wind whips up it seems less than that. Gore itself has a population of 9,000 and is reliant on farming as its biggest industry. Although sheep farming was the mainstay of the region, recent years have seen a huge dairy boom. As sheep numbers have halved from their high in the 80s, dairy cattle numbers have soared. There are over 500,000 dairy cattle in Southland, nearly a threefold increase from 10 years ago. The average herd size is a staggering 517 of mostly cross-bred cows.

The Farming System

95% of New Zealand milk is processed by Fonterra, a farmer owned co-operative formed from smaller processors in 2000. This giant has been successful in building on the already strong export of dairy commodities to western countries and is now opening up markets for its products in new areas such as China and South-east Asia. Exported products such as butter, cheese and milk powder are all based on milk solids so farmers are paid per kg of solids, rather than per litre of milk as in the UK. The internal market for liquid milk is relatively small so the majority of milk production is seasonal to make the most of peak grass growth periods.

Fonterra effectively stops collecting milk around the 1st June, or 'Gypsy Day', when many of the cows in Southland are dried off and moved to the run-off for winter grazing, returning as 'springers' ready for calving starting on the 1st of August. If there is poor grass growth and in the case of thin cows drying off will take place earlier in the year to maintain body condition without the need for expensive supplementary feed.

Unlike the drier Canterbury plains further north, grass grows almost all year round in

Southland without the use of costly irrigation systems. In the 2008-2009 season the average yield was 374 kg milk solids/cow, the highest in New Zealand. Couple this with the dairy boom in 2007 and it explains the recent huge increase in cattle numbers.

The management and ownership of the farms varies enormously. There are farms that have been owned and run by the same family for years and also recent conversions by sheep farmers who have been lured by the higher profits in dairy farming. Many dairy conversions have also been funded by companies with shareholders or syndicates of farmers and non-farmers alike. Management on the farms can be undertaken by contract managers or sharemilkers in a form of equity partnership. The different setups can test your communication skills as a vet. There can be several different interested parties involved in the decision making process, each with differing viewpoints and goals. On the plus side it also means that there are a lot of new

units run by progressive farmers willing to adopt new ideas.

The Practice

VetSouth is a rapidly expanding mixed practice of 6 clinics covering Southland and West Otago, formed by the amalgamation of 2 neighbouring practices employing 30 vets in a total team of 75 staff. They have been labelled a corporate practice, in contrast to the traditional vet club practices still working in the area. The main emphasis is cattle, sheep and deer work with a growing companion animal side. The busy time for farmers is also the busy time for vets so there can be several extra vets employed during the calving season. The team of vets is truly international, sometimes planning to stay only a few months and remaining for years.

In the next issue of *Livestock Matters*; Joe will talk us through his work in New Zealand, including the disease issues concerning farmers over there.



Crank Up machinery show at the Fonterra factory in Edendale

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FarmSkills one year on – what do farmers say about us?



"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 the animal needs it and when it fits in with me."

Matthew Webster, Yorkshire



"After just one workshop on FarmSkills milking routines, everybody is now in the same routine and milking exactly as I want them to."

Chris Simmons, Gloucester

"I have saved money by starting regular bull fertility testing and condition scoring since going on the FarmSkills 'Finding the Right Beef Bull' workshop."

Fred Scott, Northumberland



"I sample every clinical mastitis case following the FarmSkills mastitis prevention course."

Alex Burrows, Derbyshire



"The opportunity to meet other pig farmers and learn about their methods of production through directed informal discussion led to renewed enthusiasm on our farm – our staff came back wanting more!"

Richard Lister, Yorkshire



"The FarmSkills course on maximising lamb survival gave me some really practical techniques for this year's lambing season."

Claire Crocker, Somerset

Why not take part in the FarmSkills Challenge at this year's Dairy Event?

We're on Stand AH-285

– see how FarmSkills can help grow your business.

Dairy Event and Livestock Show
7th & 8th September 2010
N.I.C. Birmingham
Tuesday 7th September
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We regularly run courses across the country in DIY AI, cattle and sheep foot trimming, cattle nutrition and mastitis control, calf rearing and buying the right beef bull – along with many others.

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