XLVets - EXCELLENCE IN PRACTICE

FARMING review

NOVEMBER 2008
FARM HEALTH PLANNING

XLVets Member Practices

608 Vet Group
Allen and Partners
Alnorthumbria Veterinary Group
Ardene House Veterinary Hospital
Belmont Veterinary Centre
Bishopton Veterinary Group
Cain Vet Centre
Calweton Veterinary Practice
Castle Veterinary Surgeons
Chapelfield Veterinary Partnership
Clyde Veterinary Group
Drove Veterinary Hospital
Endell Veterinary Group
Farm First Veterinary Services
Fenwold Veterinary Centre
Friars Moor Veterinary Clinic
Glenthorne Veterinary Group
Hook Norton Veterinary Surgeons
Kingfisher Veterinary Practice
Kingsway Veterinary Group
Lambert, Leonard & May
Larkmead Veterinary Group
Macpherson O'Sullivan Ltd
Millcroft Veterinary Group
Minster Veterinary Practice
Northvet Veterinary Group
Paragon Veterinary Group
Rosevean Veterinary Practice
Rutland Veterinary Centre
Scarsdale Veterinary Hospital
Scott Mitchell Associates
Shepton Veterinary Group
Southfield Veterinary Centre
Wensum Valley Veterinary Surgeons
Westmorland Veterinary Group
Willows Veterinary Group
Wright & Morten

www.xlvets.co.uk

Farm Health Planning
Healthy Animals Healthy Profits

xlvets Excellence in Practice

xlvets
Excellence in Practice

For further Farming Information and advice, please contact your local XLVets Practice.

www.xlvets.co.uk

HERD HEALTH PLANNING IS AN INVESTMENT IN HEALTH WHICH EVERY FARM SHOULD BE MAKING

FARM HEALTH PLANNING PROJECTS

Proactive health planning and teamwork improves herd performance

Better fertility and more calves, better housing and less pneumonia and mastitis, better biosecurity and less disease - these are just some examples of what has been achieved on the beef and dairy farms which took part in the Defra-funded Herd Health Planning initiatives, organised by XLVets.

Farm Health Planning
Healthy Animals Healthy Profits

A whole series of projects have been running throughout the country and in this magazine we have included an update on 6 of these projects.

Dairy Health Planning Project	Matthew Pugh Belmont Veterinary Centre James Hawkins Dairy Farmer
Beef Health Planning Project	Steve Trickey Chapelfield Veterinary Surgeons Ben Cole Beef Producer
Beef Health Planning Project	Helen Taylor Hook Norton Veterinary Surgeons Robert Hobill Farm Manager
Dairy Health Planning Project	Rod Welford Millcroft Veterinary Group Robin and Richard Bell Dairy Farmers
Beef Health Planning Project	Mike Thorne Farm Veterinary Solutions Robert and Sue Scott Farmers
Dairy Health Planning Project	Richard Knight Westmorland Veterinary Group David Inman Dairy Farmer

SPEAK TO YOUR XLVET ABOUT ANY ASPECTS OF FARM HEALTH PLANNING ON YOUR FARM.

the PROJECTS

Below (l to r) Herd manager Dave Evans, owner James Hawkins and XLVets' Matthew Pugh

Bottom Tight biosecurity - animals are screened and blood tested for major diseases before entering the herd.

Belmont Veterinary Centre
Hereford, Herefordshire

FARM HEALTH PLANNING

... at Thinghill Court

SAVING A FURTHER £19,000 THROUGH IMPROVED MASTITIS CONTROL IS ONE OF A NUMBER OF ACHIEVABLE TARGETS SET FOR THE HEREFORDSHIRE BASED THINGHILL COURT HERD.

Dairy HP Project Herd Manager Dave Evans, owner James Hawkins and Belmont's Matthew Pugh

Reducing the high mastitis levels, significantly improving fertility and enriching dry cow nutrition were the core focus areas of a comprehensive 12-month Farm Health Plan initiative funded by Defra. The 290 cow dairy herd, producing two million litres of milk, forms an important part of a large multiple farm enterprise based at Withington for owner James Hawkins.

Mr Hawkins and his herd manager Dave Evans have focused on improving weaknesses within the 7,800 litre herd with XLVets' Matthew Pugh of Belmont Veterinary Centre. Practical advice was also provided by Ian Ohnstad, a milking technology specialist with The Dairy Group, James Husband, a nutritionist with Evidence Based Veterinary Consultancy (EBVC) and Matthew Prosser of farm animal feed suppliers, Countrywide.

Due to herd expansion, the full impact of improved herd health will not be felt until 2009. But the financial benefits of working to a vigorous Farm Health Plan are already showing, according to XLVets' Matthew Pugh.

Headline figures to date include a noteworthy drop of 60 mastitis cases in total saving £6,000 overall. Milk quality penalties of almost £6,000 have been prevented due to a huge fall in high Bulk Milk Somatic Cell Count (BMSCC). Prior to the project, BMSCC for the herd was running at 300,000 cells/ml and peaked at 415,000 cells/ml. Twelve months on the tank is consistently running below 180,000 cells/ml.

Significant mastitis control

Mastitis control in the Thinghill Court herd had been a huge challenge due to high levels of Bovine TB. At its worst, 160 cows were lost in one year alone resulting in the retention of chronically infected cows to maintain numbers.

'During 2006/07 it was estimated that the mastitis was costing £63,000 or £245 per cow,' states Matthew Pugh. 'Almost 400 mastitis cases were recorded (152 cases per 100 cows per year) of which 151 cases were repeats. This hit milk yield and quality hard and 32 chronically infected cows had to be culled to reduce the reservoir of infection within the herd.'

Problems were compounded during the winter of 2007/08 when a group of 60 autumn/winter calving cows were purchased. This increased the pressure on the dry cow yards resulting in high levels of environmental mastitis.

'Notably, 55% of all cases were occurring within 100 days post calving and two-thirds of all cases were found to be Streptococcus uberis. What's more, the replacement cows had not received dry cow therapy or teat sealant putting them at significant risk,' points out Mr Pugh.

'This helped explain why mastitis had not been reduced further. More effort will be concentrated on reducing the environmental mastitis challenge to dry and fresh calved cows.'

Reducing mastitis cases down to less than 18 per month (75 per 100 cows) could add a further 1.4ppl to the milk cheque, representing a total saving of just under £29,000, the team have calculated.

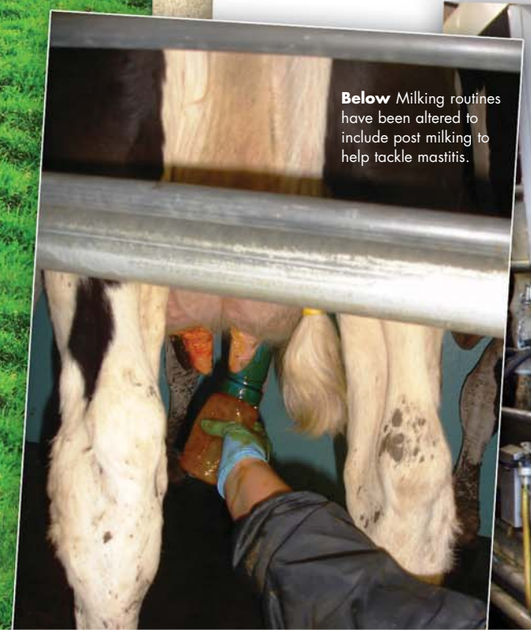
The concerted effort by the farm and the farm health team have seen rolling twelve month mastitis figures fall to 115 per 100 cows. From February 2008, the results have been even more impressive with the herd set to average 65 cases per 100 cows per year if current levels can be maintained. This will equate to 245 less cases of mastitis.

It's a realistic target, notes Matthew Pugh. 'Using herd milk records, cows have been grouped based on individual Somatic Cell Counts (SCC). Low SCC cows enter the parlour first. Staff are now extra vigilant when higher SCC cows are milked. And milking routines have also been altered to include post milking teat dipping and clusters are cleaned between each cow.'

This is further backed by a no nonsense culling policy to rid the herd of exceptionally high SCC cows and repeat offenders.

An investment in Automatic Cluster Removers is also planned to prevent over-milking.

Looking back, herd manager Dave Evans describes the period of high mastitis cases as dire and very demoralising. Owner James Hawkins admits that he hadn't been prepared for effects of severe mastitis. 'Financially, it was a very painful episode and not one I want to repeat. With Matthew's help and a change of focus we're moving forward. The cost benefits leading from the Farm Health Plan will be re-invested in the business,' he adds.



Below Milking routines have been altered to include post milking to help tackle mastitis.

Dairy HP Project Herd Manager Dave Evans, owner James Hawkins and Belmont's Matthew Pugh continued...

'...fertility is a complex trait. It's related to numerous factors like negative energy balance, infectious disease, accuracy of oestrus detection and insemination technique.' Matthew Pugh

Better Fertility

Prior to the project starting, milk yield was also being affected by extended calving intervals, which had reached 420 days. The excess 55 day interval was calculated to be costing the Thinghill Herd some £29,400 each year.

Improved fertility has dramatically improved the calving pattern of the herd. In March 2007, typically calving to conception was 163 days. By January 2008 this had fallen to 113 days, closer to the 90-day target set for the herd. In addition, cows not in calf at 200 days post calving fell from 38% to 23% over the same period.

'Fertility is a complex trait. It's related to numerous factors like negative energy balance, infectious disease, accuracy of oestrus detection and insemination technique. The Plan also highlighted we should pay greater attention to resolving uterine infections,' says Mr Pugh.

Dry cow nutrition

Conception rates have also been improved through changes to dry cow nutrition to counteract a negative-energy-balance (NEB). EBVC's James Husband suggested that dry cow periods be shortened to 40 days. Grazing dry cows were also placed on a high-fibre TMR ration.

Blood sampling for Beta-Hydroxy-Butyrate (BHB) post calving and cross-referencing with milk records is helping identify issues quickly.

Diet changes have also virtually eliminated milk fever cases - low blood calcium - which had been running at 8%. Furthermore, the number of displaced abomasums fell from 20 down to two and there was a reduction in metritis cases.

Improved biosecurity

Thinghill Court now employs greater bio-security procedures as a consequence of the Farm Health Plan. Bought-in cows pose a disease risk and are screened before entering the herd.

Screening animals and blood testing for major diseases like Johne's disease, IBR (Infectious bovine rhinotracheitis), BVD (Bovine Viral Diarrhoea), Neospora and Leptospirosis cannot be over-emphasised, stresses Matthew Pugh.

'It can require an extended period before signs of disease appear. Without monitoring you may not know that it is present in your dairy herd. You wouldn't buy a secondhand car without checking it over first. It's the same principle when buying stock. You need to assess the risks they present to your herd and likewise what risks does the herd present to the incoming cows.'

The Plan has also helped reduce the risk of BVD infection through bulk milk sampling and strategic blood sampling of young stock. This will check for the existence of high risk persistently infected (PI) animals.

Similarly, a control policy has been implemented to control liver fluke in both cows and young stock. The effectiveness of the control measures will be regularly monitored using blood samples, faecal egg counts and postmortem material.

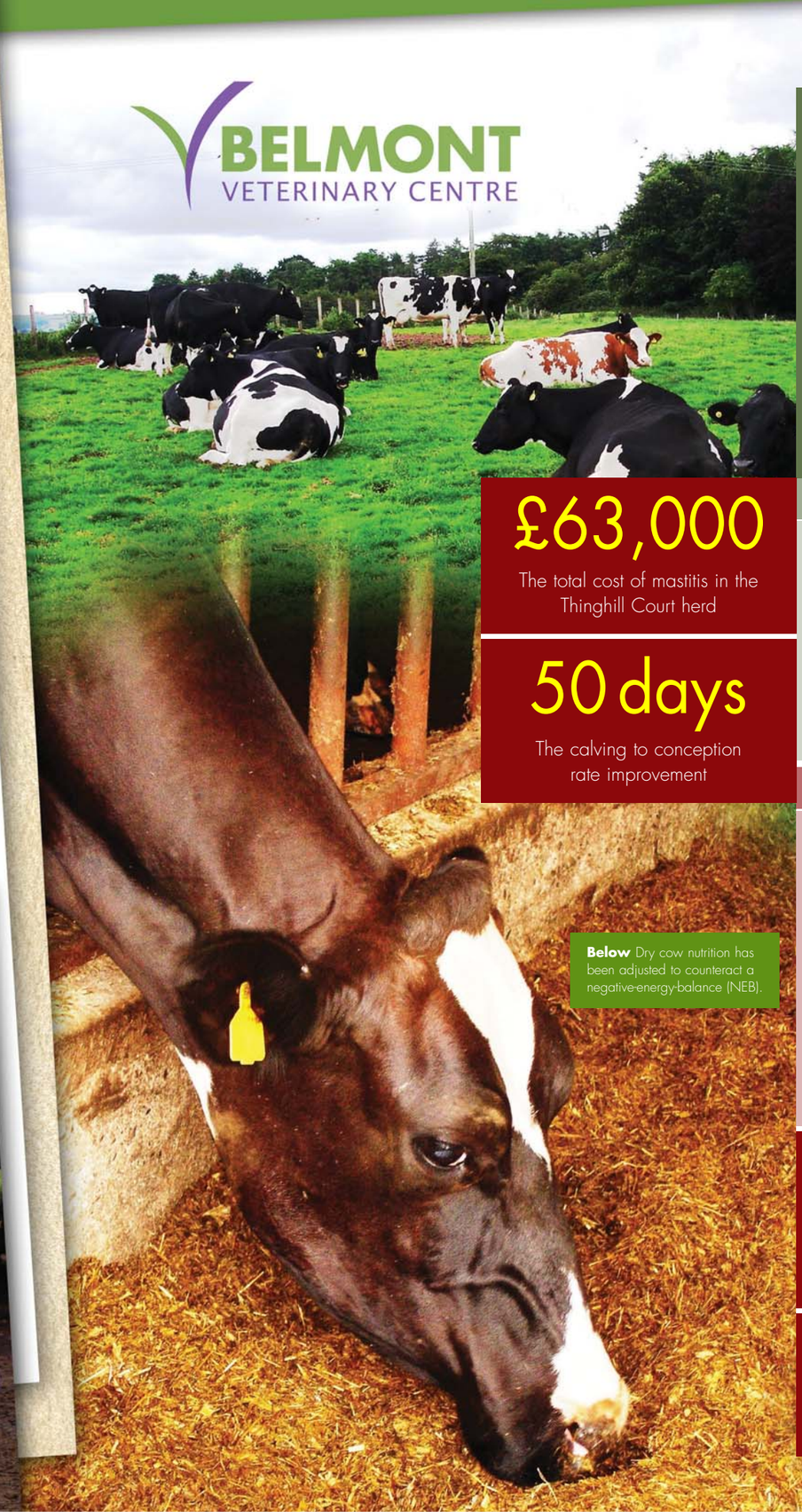
Matthew Pugh adds: 'James and Dave have shown a real desire to improve herd health. Their dedicated approach to monitoring and recording is very important to achieving a high health status.'

Herd manager, Dave Evans thought that a Farm Health Plan would involve loads more paperwork and form filling.

'This is completely different from assurance schemes and cross compliance. It's a working document which we refer too. It's led to lots of practical outcomes and realistic targets. My staff and I now better understand the challenges the herd faces.'

'The financial improvements have been impressive. Based on these and projected savings I'm more confident about investing in the dairy business,' adds James Hawkins.

Below Herd manager Dave Evans (left) and James Hawkins have used the Farm Health Plan to improve weaknesses and are impressed with how the herd has responded.



Below Dry cow nutrition has been adjusted to counteract a negative-energy-balance (NEB).

SHARING KNOWLEDGE - FHP RESULTS...

A large number of farmers and allied suppliers attended an open meeting to gain a far clearer understanding of Farm Health Plans to improve health, welfare and productivity.

The XLVets' organised meeting aimed to show the difference between herd health plans and farm assurance. The audience were informed about the results of the Thinghill Court herd and were left in no doubt about the number of benefits of working to a comprehensive plan.

£63,000
The total cost of mastitis in the Thinghill Court herd

50 days
The calving to conception rate improvement

Thinghill Court Farm Facts

- Large Multiple Farm Enterprise
- 290 cows + 170 followers
- Producing 2 million litres of milk
- Cubicle housed with dry cows on straw yards
- Semi TMR fed plus concentrate in the parlour

Farm Health Plan Results

- Remarkable cost benefits
- Improved milk yields and quality
- Major mastitis control focus
- New milking routine
- Fertility rates increased
- Monitoring dry cow nutrition
- Milk fever eradicated
- Tight biosecurity - prevented disease entering herd

£29,000
The cost savings of reducing mastitis cases down to less than 18 per month

251,000 cells/ml
The fall in BMSCC resulting from management changes

Above The high-value pedigree herd will be managed according to the farm health plan.

FARM HEALTH PLANNING *at Lodge Farm*

Chapelfield VETERINARY PARTNERSHIP

Above A disease free status will help market the pedigree herd, says XLVets' Steve Trickey.

STEVE TRICKEY CHAPELFIELD VETERINARY PARTNERSHIP **BEN COLE** BEEF PRODUCER

Ben Cole's ultimate aim is to own and manage an 80-strong pedigree Limousin herd selling breeding females and bulls. Continued investment in high quality blood lines is being supported by a robust Farm Health Plan designed to ensure a high health status for the herd and maximise outputs. In partnership with his father and brother, Ben Cole farms 1,500 acres and runs a farm contracting business from their base at Lodge Farm, Winfarthing near Diss in Norfolk.

XLVets' Steve Trickey of Long Stratton-based Chapelfield Veterinary Partnership has helped devise the Farm Health Plan as part of a Defra-funded project.

'The Farm Health Plan has helped show us a different way forward,' says Ben Cole.

Significant investment is being made in new purpose built buildings and handling facilities as well as converting existing farm buildings which were used to calve a previous dairy herd.

A new, complete diet feeder and mixer wagon will also produce rations for the herd, formulated to meet the nutritional requirements of pedigree Limousin cows.

Ben admits that feeding needed to improve from the previous method of dropping silage bales into yards.

'Given our proximity to a major sugar beet factory, the ration will consist of sugar beet pulp and brewers' grains and utilise the farm's own straw to help keep feed costs down. We avoid feeding vegetables as we don't want to risk animals choking.'

As pedigree numbers increase through breeding and further purchases, the current 45-head Simmental X commercial suckler herd will gradually diminish. The plan is to build up the herd to 80 pedigree breeding females. Animals will be split into small groups, calving in January, April and September in one month blocks, enabling the business to sell animals throughout the year.

'Around 18 months ago we took a long hard look at the performance of the suckler herd. We were experiencing problems with fertility and subsequent calving problems. Focusing on other areas of our arable business meant we'd taken our 'eye of the ball'.

'Therefore, we decided to bite the bullet and develop a high-value pedigree herd which would be managed using a well thought out farm health plan. Steve's suggestion that we took part in the Defra project has also led to improvements within the existing herd and will pay dividends in the long run,' adds Mr Cole.

Regular blood sampling of young stock was initiated assessing for IBR (Infectious bovine rhinotracheitis), BVD (Bovine Viral Diarrhoea), Leptospirosis and Johne's disease.

'Results showed no sign of disease and we aim to preserve this. A disease free status will help market the pedigree herd,' explains XLVets' Steve Trickey.

'Geographically, the farm is fortunate enough to be situated in a low cattle density area and the risk of disease being spread from other herds is very low. Ben's animals can come into contact with his uncle's dairy herd, but fortunately the dairy herd health is high. But we are monitoring this situation. The new cattle housing on the farm will be a big help keeping animals separated.'

According to Mr Trickey, the Farm Health Plan identified that animal performance was being affected by high levels of liver fluke found through faecal egg counts. 'Conditions on water meadows are perfect for liver fluke spread. Eggs passed from infected animals hatch in warm damp conditions and eventually develop and settle on the pasture.

'Severe infections cause condition and weight loss in cattle and can have a knock-on effect on fertility and breeding,' he adds.

BEN COLE BEEF PRODUCER

Top Sympa sired offspring are part of Ben Cole's continued investment in high quality blood lines.

Above Ben Cole says Farm Health Planning has helped show him a different way forward.

Above A mobile handling facility will lead to regular monitoring to prevent disease and measure pregnancy.

Below Happy with their Farm Health Plan, XLVets' Steve Trickey (left) and beef producer Ben Cole.

STEVE TRICKEY CHAPELFIELD VETERINARY PARTNERSHIP **BEN COLE** BEEF PRODUCER

Lodge Farm Facts

- 1,500 acres mainly arable
- Establishing pedigree Limousin herd
- Buying high value blood lines
- Plans to Signet record
- New cattle building investment

Farm Health Plan Successes

- Maintaining high health status
- Regular blood sampling
- Improved and regular handling
- Tackled high liver fluke levels
- Formulated feed rations

Improved handling facilities

Greater emphasis is placed on regular monitoring to prevent disease and improve calving patterns. This has been helped by the purchase of a mobile handling facility.

Animal handling and pregnancy scanning was timed around when the animals could be transported back to Lodge Farm to be put through a fixed race and crush.

'We identified that moving forward we need to handle and assess stock at times relevant to the production cycle of the animal, rather than them fitting around our schedule. The mobile facility means we can regularly travel to and set up in fields where the stock are based. This will lower animal stress and has improved health and safety for the handlers. It's quick and easy to use,' says Mr Cole.

During the first early summer outing with the mobile race revealed a cow not in calf caused by cystic ovarian disease and the animal was treated. Mr Cole admits that in the past this would not have been picked up until October and possibly the cow would have been culled.

A weight cell will also be bought for the mobile crush to regularly record young stock weight through the Meat and Livestock Commission's Signet breeding programme. Cattle will also be scanned and muscle scored when they are between 350 and 500 days of age. This allows eye muscle depth and fat depth to be measured.

Data will be collected on individual animals within the herd to be analysed using Best Linear Unbiased Predictor (BLUP). The BLUP procedure produces Estimated Breeding Values (EBVs) for each animal for each recorded trait.

The Coles are not afraid to make tough business decisions. After decades of milk production, in 2003. The family took the decision to sell their entire Blacksands milking herd of Holstein Friesian cattle.

'A combination of factors like finding skilled labour and increased production led us to stop milking. Cow cubicle buildings and general handling facilities also needed updating. It was a tough business decision to make. We did miss the cows dearly in the beginning. But looking back it was the right decision to make,' says Mr Cole.

The business took some time to explore new market opportunities for grazing a series of low-input water meadows which are part of a long-term Countryside Stewardship Scheme.

Pure bred Limousins

Speaking to buyers, other farmers and friends, Ben Cole opted for pure bred Limousins.

'In terms of numbers bought, it is the top breed in the UK and found on many commercial and pedigree dairy herds and beef herds. They are renowned for ease of calving and ease of management as well as their fleshing qualities and feed conversion,' he says.

All new breeding stock is bought privately from known sources. 'It's very important when establishing a pedigree herd to know the history of the animals. When I buy a heifer from my buyer, I like to be able to see the whole blood line - its mother, brother, sisters and father.

Apart from the visual appearance he also checks a bull's score for Estimated Breed Value traits - a measure of an animal's potential genetic ability.

He has bought breeding progeny out of a French imported bull called Sympa from Matt and Craig Ridley, who own the Halcliffe pedigree Limousin herd, near Wigton, Cumbria.

The Ridley family have been breeding pedigree livestock on their hill farm for more than thirty years. They achieved a world record price paid for a Limousin when they sold Halcliffe Vermount for

100,000 gns

in 2006.

HELEN TAYLOR HOOK NORTON VETERINARY SURGEONS **ROBERT HOBILL** MODEL FARM

Hook Norton Veterinary Surgeons
Banbury, Oxford

FARM HEALTH PLANNING • *at Model Farm*

When Oxfordshire-based Hamilton Farms decided to convert around 80 cattle to organic production in autumn 2006, farm manager Robert Hobill realised the importance of working to a detailed farm animal health plan.

When the opportunity to take part in a Defra-funded Farm Animal Health planning project was offered, Mr Hobill didn't hesitate in making full use of the service. Working in conjunction with XLVets' Helen Taylor of Hook Norton Veterinary Surgeons at Hook Norton, near Banbury, a detailed plan was devised to show how the suckler herd's production system would be developed to promote good health, and become less dependent on veterinary medicines.

And twelve months on, Mr Hobill believes the project has been instrumental to the success of his organic conversion.

Around 70 Simmental X breeding cows and 12 rare breed White Park cattle are kept on traditional parkland as part of the 3,850-acre Model Farm estate at Ditchley Park near Chipping Norton. All offspring will be finished on the farm as part of a contract to supply Waitrose supermarkets.

THE CONVERSION PROCESS

Around 500 acres of mainly permanent pasture and grass leys are going through the two-year organic conversion process, while the arable cropping land will be managed conventionally. The grassland will also be entered under a HLS agreement from 2009.

XLVets' Helen Taylor points out that not being able to use medicines and antibiotics as preventative treatments makes preventative management crucial. The use of homoeopathic remedies is also encouraged.

'However, any problems will be dealt with promptly to prevent distress in the event of illness or injury,' she adds.

Prior to starting the conversion process the spring calving suckler herd was managed extensively and the traditional parkland received very few inputs.

'Given the previous management system, we expected the conversion to organic to run smoothly,' explains Robert Hobill. 'However, in the first year we experienced a number of challenges both in terms of animal production and forage supplies, in part affected by the extremely wet summer of 2007.'

Blood samples were taken from all the animals to check for major diseases like IBR (infectious bovine rhinotracheitis), BVD (Bovine Viral Diarrhoea), Leptospirosis and Johne's disease.

Results revealed that the health status of the cattle was high, however pregnancy diagnosis revealed a high number of barren cows. And some calves were suffering from poor growth rate. After further blood sampling, the conclusion drawn was of molybdenum toxicity, causing copper deficiency.

MOLYBDENUM TOXICITY

'Copper deficiency is a result of molybdenum toxicity. The high molybdenum levels make copper unavailable for use by the cow, which is linked to poor fertility,' says Helen Taylor.

'Increasing the intake of copper can prevent molybdenum toxicity. However, this requires careful calculation. Increasing copper in the diet to try and improve fertility can result in toxic levels of copper being fed.

'It was decided to bolus the cattle and yearlings. This has worked well,' she adds.

Establishing the selenium status of soils and animals during the conversion period on Model Farm has been part of the overall animal health plan.

This revealed some selenium/vitamin E deficiency. A management strategy is in place combining feedstuffs low and high in vitamin E, mineral licks and the strategic use of boluses.

LUNGWORM

Lungworm was also contributing towards a decline in calf performance.

'While we saw some occasional coughing others stood in a head-extended position with rapid shallow breathing and frequent coughing.'

The Farm Health Plan was used to check the lungworm history of the farm through faecal samples from the calves to determine the lungworm burden.

'Vaccinating calves before turnout will now be key to controlling this problem. The lower stocking rates will help dilute future infection. Future actions also include not running young calves with older calves and to avoid lush wet pastures,' she adds.

Far Top Left Molybdenum toxicity which is linked to poor fertility was diagnosed through the Farm Health Plan.

Far Left The herd is on course for a calving pattern of 9 weeks with 80% of calves born in the first month.

Left Preventative management continues to be crucial in the organic herd, says XLVets' Helen Taylor.

Above White Park cattle help graze the traditional parkland which will be entered under a HLS agreement in 2009.

HELEN TAYLOR HOOK NORTON VETERINARY SURGEONS **ROBERT HOBILL** MODEL FARM

TIGHTENING CALVING PERIODS

Correcting molybdenum toxicity and improving forage quality has helped improve fertility rates, according to Helen Taylor.

Capitalising on these successes has been a renewed focus on calving interval. 'Ideally, we're aiming for a calving pattern of 9 weeks with 80% of calves born in the first month. This was achieved for the first time in spring '07 following a concerted effort to limit to 9 weeks the time bulls spend with cows after calving.'

'Having a greater number of youngstock of all the same age and size will help Robert in his day to day husbandry and marketing of his finished animals.'

BULL HEALTH

Bull selection and fertility tests have been stepped up through the Farm Health Plan.

Each new bull is quarantined and given a full clinical examination of external and internal sexual organs. Semen samples are tested, for new and existing bulls, before the breeding season.

'Interestingly, we have seen a link between semen quality and bull dominance in the herd,' says Helen Taylor. 'The dominant bull has a greater number of highly mobile sperm. Armed with this type of knowledge we can improve bull condition before turnout with the cows, set the bull to cow ratio, and rotate bulls when required.'

Bulls are bought from known sources and supported by EBV (Estimated Breeding Value) scores. Calving ease is an important trait, claims Robert Hobill. 'Previously, we've had to help calve around a third of the herd. I want to get this down to less than 10%.' He is also considering several other bull breeds that are suited to extensive systems and that 'do well off forage'. Before making any final decisions he plans to discuss it with his buyers.

IMPROVING FORAGE SUPPLIES

Under organic certification rules, at least 60% of the herd's diet must come from organic forage produced on the farm. Extending forage supplies is the real challenge, says Mr Hobill, who is concentrating on improving feed protein contents using a variety of crops.

Soil type at Model Farm is predominantly light and free draining. So much so that during an extended warm, dry period grass and forage yields are affected.

'Achieving high clover contents in swards is required to boost herbage production. The clover will also capture nitrogen from the air to help fixate the nutrient. To improve clover content across our permanent parkland pastures, clover seed is direct drilled into the sward. However, maintaining the high clover contents in these swards needs careful management,' he says.

A major source of nitrogen within an organic system are legumes. So short-term grass leys will be rotated with legumes at Model Farm.

'Like clover, legumes will help us take atmospheric nitrogen and convert it to nitrogen fertiliser. We are under sowing peas into spring barley crops. To further help extend forage supplies some cattle will be out wintered on forage rape and stubble turnips,' adds Mr Hobill.

SHARING KNOWLEDGE - FHP RESULTS...

An XLVets organised farm walk at Model Farm to discuss the results and benefits of the Farm Health Plan attracted a high number of beef farmers, advisers and vets. Robert Hobill says the success of the day was reflected in the number of questions asked and the discussion it created. 'Such was the interest shown, unfortunately, time ran short to cover all of the topics.'

A separate, local meeting focused on cattle welfare and getting the environmental conditions right inside livestock buildings. Independent beef adviser, Dr Basil Lowman explained to farmers that most buildings were not adequate for today's beef production systems. He made a number of suggestions where improvements need to be made by producers to prevent disease and maximise livestock outputs.

Model Farm Facts

- 3,850 acre estate
- 500 acres grassland
- 70-head Simmental X suckler herd and White Park cattle
- Closed herd system
- Cattle and grass going through organic conversion
- Finished cattle to be sold to Waitrose

Farm Health Plan Results

- Instrumental to organic conversion
- Molybdenum toxicity identified and tackled
- Minimised lungworm risk
- Better bull screening
- Enhanced biosecurity
- Improved forage quality

Left Robert Hobill believes that without the farm health plan drawn up with XLVets' Helen Taylor, organic conversion would have been unsuccessful.

Below Robert Hobill is seeking to improve clover contents in permanent grassland through direct drilling.

Below Robin and Richard Bell are delighted with the success of their Farm Health Plan developed with XLVets' Rod Welford (right).

Bottom Controlling both clinical and sub-clinical disease has helped drive forward milk output.

MILLCROFT VETERINARY GROUP

at Moorland Close Farm

Millcroft Veterinary Group
Cockermouth, Cumbria

HEALTH PLANNING PROJECT

Rod Welford Millcroft Veterinary Group, Cumbria

Controlling both clinical and sub-clinical disease has helped drive forward milk output of a 150-cow pedigree Holstein herd at Moorland Close Farm, Cockermouth in Cumbria. Father and son producers Robin and Richard Bell say their Paddle herd has benefited hugely from the advice received from specialists as part of a Defra-funded Farm Health Planning project. The animal health team was led by XLVets' Rod Welford of Millcroft Veterinary Group and also comprised Ian Ohnstad of The Dairy Group, and nutritionists Martin Helliwell of BOCM-Pauls and Richard Vecqueray of Evidence Based Vet Consultancy (EBVC).

The herd is kept across 240-acres of all grass and average yields are 9,500 litres with 3.99% butterfat and 3.08% protein. Grass silage forms the bulk of the cows' diet combined with high protein concentrate fed to yield through a combination of in and out of parlour feeders.

Controlling sub-clinical disease in calving heifers, lowering mastitis cases and improving cow diets during the late dry and peri-calving period, were the three core areas identified by the team. This was based on the disease history of the farm and recognition of the challenges faced in feeding high yielding Holstein cows.

CALVING HEIFERS

Post calving diseases had been a recurring theme in the herd's autumn calving cohort of heifers. Respiratory disease, metritis and digestive disorders had troubled the cohort at different times since 2004.

Investigations suggested that this group had an underlying sub-clinical theme, explains Rod Welford. Targeted blood sampling revealed that grazing heifers were suffering from selenium deficiency. The trace element boluses administered at turnout proved insufficient to meet heifers' needs through the vulnerable calving period.

'Adequate selenium is important for proper functioning of the immune and reproductive systems and for optimal growth. This deficiency was corrected through selenium and vitamin E supplementation,' says Mr Welford.

Management changes were implemented to smooth the transition of the grazed calving heifers into the winter housed milking herd. In-calf heifers were housed three weeks earlier to get them acclimatised to the three C's - Concrete, Cubicles and socialise with older dry Cows.

Monthly recording of milk yields and quality allowed nutritionists Richard Vecqueray and Martin Helliwell to track cow performance. This was improved with hands on monitoring of the cows' nutritional health - changes in body condition, faecal consistency and rumen fill. The goal was to prevent Sub-Acute Ruminal Acidosis (SARA) and sub-clinical ketosis associated with a Negative Energy Balance (NEB), both of which can severely undermine herd health.

The new feeding regime is being monitored by regular measurements of blood ketones (BHB) in 10 cows each month alongside body condition scoring of dry and freshly calved cows (see table 1 overleaf).

This provides the Bells with an immediate cow side assessment of the energy balance in the peri-calving period. The results are relayed via a rolling 'metabolic monitor' using a traffic light scoring system to track the herd's energy balance. This helped communicate disease and performance issues between the Bells, their vet and nutritionist.

'The approach has worked. In the heifer group alone, adding an extra £7,000 to the bottom line through cost saving and improved performance. It was achieved by the cohort of 23 autumn calving heifers joining the milking group without expressing any of the previous years' problem's. This is believed to have saved at least one casualty and another potential culled cow from failure to rebreed, representing a £3,000 saving,' says Mr Welford.

'What's more, heifer yields have improved leading to an extra £3,135. Milk records show an average increase of 5.45 litres per day over the first 100 days of lactation. Calving to conception rates have improved by 14 days due to better body condition, saving a further £966,' he adds.

Despite all this, part way through the Farm Animal Health project the group felt they were not 100% happy with milk yields and the metabolic status (energy balance).

The problem turned out to be equipment related. Poorly calibrated in-parlour feeders, were releasing just 75% of the predicted concentrate amount. Increased yields - up by 3 litres - followed immediately after the feeders were adjusted.

Above Reducing mastitis - a dynamic parlour test formed part of the action plan.

MASTITIS CONTROL

Moorland Close Farm was restocked after the Foot and Mouth in 2001 and the Bells inherited some problem cows with chronically infected udders.

Prior to the project beginning the clinical incidence had been reduced by 27 cases per 100 cows. 'With each mastitis case costing £182, this helped reduce disease cost in the Paddle herd by £7,000,' states Rod Welford.

When the project began the herd still recorded 47 cases per 100 cows, nine above the average for all dairy herds monitored by the Millcroft Veterinary Group, illustrated in table 1. The target is to reduce cases to below the median herd incidence of 36 cases per 100 cows, saving a further £3,000 each year.

Mr Welford points out that mastitis is one of the three major reasons that cows are culled. 'For every case of clinical mastitis in the herd, there can be up to 40 sub-clinical cases. Sub-clinical mastitis should be taken seriously and be thoroughly investigated. The Farm Animal Health project meant we could do that.'

The Dairy Group's Ian Ohnstad performed a dynamic parlour test. He fine tuned the milking technique which included cluster dipping between problem cows. Swabbing clusters pre and post dipping proved that the process had eliminated bacteria.

Bacteriology of clinical cases revealed mastitis was linked to bugs of environmental origin. Smoke bomb tests inside cubicle buildings highlighted the need to improve ventilation and reduce humidity. The Bells opened up the sides of buildings and added roof ridges which massively improved air quality.

Herd monitoring, following the changes, via bulk tank somatic cell counts (BTSCC) and somatic cell count (SCC) at an individual cow level showed a drop from 220,000 to 150,000 cells/ml over a four month period.

'This was achieved for an investment of about £1,000. There is a clear cost benefit. Furthermore, the improvements in the cubicle shed are long-term and will provide a continued positive impact,' adds Mr Welford.

The project also tackled sub-clinical disease in young stock by preventing coccidia through an integrated calf rearing system. Robin Bell is delighted with the outcome of the Farm Animal Health project. 'It's good to step back and look at your business using expert help. The results speak volumes about the first-rate help and advice we've received. There's no doubting that high performing cows do respond to good management,' he says.

Now his herd is performing well, Mr Bell is determined to keep the momentum going. 'It's during the 'good times' that we have a little more time to reassess why we are doing things in a certain way. We're now getting better at asking 'why' and exploring whether the business would benefit from a different approach.'

Another success of the project has been the sharing of knowledge with local farmers through several open days. 'I know that several producers have altered their management since attending the farm open days and hearing about animal health planning,' adds Mr Bell.

XLVets' Rod Welford points out that a successful Farm Health Plan relies on dynamic open dialogue between a farmer, their vet and other specialist consultants. 'It's all geared towards improving herd health and profitability. Profit is the clear driver of a Farm Health Plan.

'The objective is to invest in health rather than pay for disease. To achieve this, farms need to 'plan to produce rather than producing a plan'. Overall, healthy stock will lead to healthy profits, as demonstrated by the Paddle Herd.'

Clinical Mastitis Treatment Rate: cases per 100cows p.a.

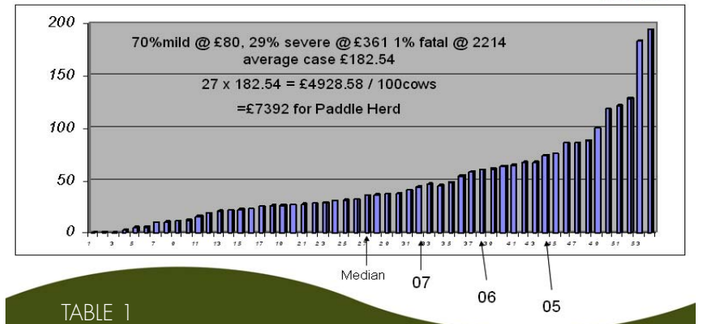


TABLE 1

An industry led partnership in association with Defra www.defra.gov.uk/fhp

Sub-clinical ketosis 'N.E.B.' in fresh calved cows

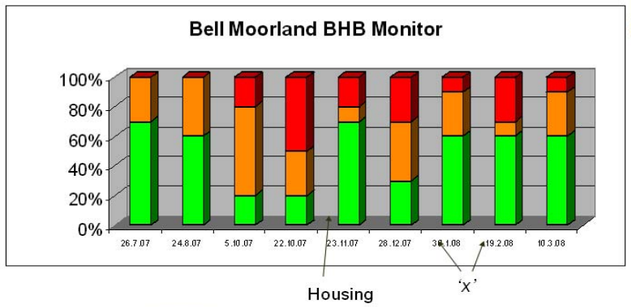


TABLE 2

An industry led partnership in association with Defra www.defra.gov.uk/fhp

SHARING KNOWLEDGE - FHP RESULTS...

A large number of advisers and allied suppliers attended an open meeting, held in conjunction with fellow XLVets' practice Paragon Veterinary Group. This created a lively discussion and people gained a far clearer understanding of Farm Health Plans and the role they can play with farmers to improve health, welfare and productivity.

An immediate challenge was to break the existing mindset that associated 'herd health plans' with the bureaucracy of farm assurance.

Two further farmer meetings attracted over 90 people. Farmers were challenged to get the best from their 'vet spend' by using the vet and consultants to prevent disease and support production rather than as a service to 'fire fight' disease outbreaks.

Moorland Close Farm Facts

- 150-cow pedigree Paddle Herd
- Closed herd
- 9,500 litres
- 240 acre all grassland
- In and out of parlour feeders

Results of Farm Health Plan

- Increased milk yields and improved quality
- Tackled sub-clinical disease in calving heifers
- High performance feed rations
- Improved mastitis control
- Better building environment

£7,000

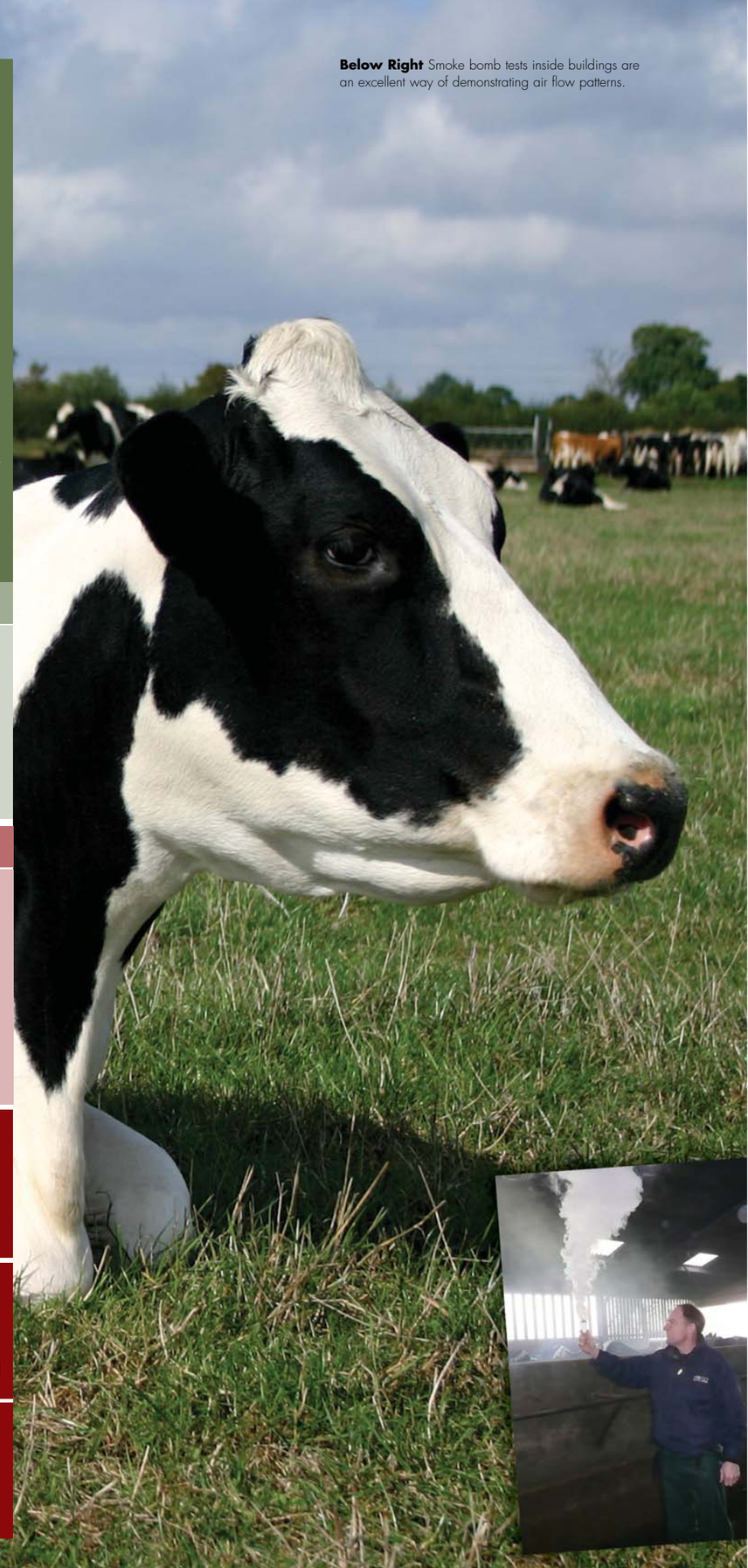
The reduction in mastitis disease cost to the Paddle herd

5.45 litres/day

The increase in heifer milk yields following sub-clinical disease control

Extra 3 litres

Yield improvements seen by re-calibrating parlour feeders



Below Right Smoke bomb tests inside buildings are an excellent way of demonstrating air flow patterns.

Mike Thorne
Farm Veterinary Solutions, Leicester

FARM HEALTH PLANNING

Home Farm & Netherfield Farm

Farm Veterinary Solutions
Rutland, Leicestershire

Above A working relationship built on trust. XLVets' Mike Thorne (left) with Sue and Robert Scott.

Measure, manage and monitor is the mantra of Robert and Sue Scott who run a 160-head Limousin X suckler spring calving herd near Uppingham, Leicestershire

Working closely with XLVets' Mike Thorne of Farm Veterinary Solutions, they introduced a series of measures to further improve the health status of their herd after receiving extra help and advice through a Defra-funded Farm Animal Health Plan project.

The Scotts farm 1,120 mixed acres across two units - Home Farm and Netherfield Farm, Harringworth. Around 420 acres of grass supports the suckler herd while a share of the cereals grown on the farm are used for winter feed. Some of the herd is out wintered on stubble turnips to help relieve the pressure on building space.

Producing high-value male store cattle and breeding females are the principal end market for the Scotts who have around 25 years of cattle management experience. Their buyers are prepared to pay a premium for cattle provided the herd is free of disease, which makes following a comprehensive Farm Health Plan, that includes a tight biosecurity policy, an absolute necessity for the long-term viability of the enterprise.

The Farm Health Plan involved taking a greater number of blood samples to test for BVD (Bovine Virus Diarrhoea), Johne's disease, IBR (Infectious Bovine Rhinotracheitis) and Leptospirosis.

Blood test results showed that the herd was disease free, giving Robert and Sue even greater confidence in the marketing of their animals, states Mike Thorne.

'This provided a solid base from which to work. However, their continued drive for excellence meant we looked at all aspects of herd management, to correct any weaknesses,' he adds.

COCCIDIOSIS

Soon after turnout last year some calves were suffering from watery diarrhoea - leading to a loss in body condition, bodyweight and a fatality. The root cause was found to be bovine coccidiosis, caused by gut parasites called Eimeria.

Infected animals can shed hundreds of thousands of oocysts through their faeces which overwinter on permanent pasture and can survive on the ground for up to a year. When a calf swallows some oocysts, they break open in the gut and release the parasites, leading in most cases to severe diarrhoea and even death.

Mike Thorne explains: 'Through faecal sampling and a calf postmortem we identified that two fields were contaminated with oocysts of Eimeria alabamensis.

Control measures for E. alabamensis this year included drenching the calves prior to turnout. 'Correct identification of the Eimeria parasite meant that we could offer precise control quickly and efficiently. After which there has been no further clinical cases of young stock with cocci,' adds Mr Thorne.

TIGHT CALVING PERIOD

Ensuring that the herd is kept free of disease like BVD is helping maintain excellent fertility levels and keeping calving periods tight, according to Mike Thorne.

'Production figures show that just 7 of the 158 cows were barren, while only six calves were lost pre-weaning during the entire 12-month production cycle. This resulted in 93% of calves being sold from cows put to service. This represents very good performance and is a significant way of improving outputs,' he says.

Around 50% of the herd calve within the first three weeks of the season and the entire herd is finished by week 12. This has led to increased sale weights at weaning and easier management of groups of calves which are split into groups by age and sex.

Below 93% of calves were sold from cows put to service.

CASE STUDY HOME FARM AND NETHERFIELD FARM CONTINUED...

BULL SELECTION

Belgium Blue bulls are the preferred terminal sire for the Scott's who are aiming for good body confirmation and meat quality. Breeding females are put to a Limousin. Good genetics are the basic building blocks of animal production, says Mike Thorne.

Whilst the Scott's use their years of experience in choosing bulls by visual appearance they have also identified the breeding traits which are giving the greatest economic returns and select bulls with the appropriate Estimated Breeding Value (EBV's).

Calving ease, 400 day growth and muscle depth are all attributes the Scott's look for in their terminal sire.

BETTER HANDLING

Bull temperament is also important. 'We like them to be used to handling. This is better for both the animal and the handler,' explains Robert Scott.

They also regularly handle their young stock. 'Our buyers need consistency so the ability to assess cattle both visually and by handling is an essential skill. We combine handling with regular weighing and recording,' adds Mr Scott.

Handling facilities at Home Farm have also been upgraded as part of the Farm Health Plan.

HEALTHY BUSINESS

In the case of the Scott's a healthy herd equates to a healthy business, reckons Mike Thorne.

'A combination of all the Farm Health Plan factors mean that groups of well-grown animals are presented at local livestock markets. The Scott's reputation for producing quality, store cattle is reflected in the premium buyers at livestock markets like Newark and Thrapston are prepared to pay. Many of their heifers are also purchased by other suckler herd owners who are confident of the herd's high health status. I was confident that Robert and Sue would benefit from the Farm Health Plan initiative. They are conscientious, maintain high standards and keep detailed records.'

The Scott's close working relationship with Mike Thorne began when he joined Farm Veterinary Solutions.

Working relationships are built on trust, explains Mrs Scott. 'At a time when we were looking to improve the herd we turned to Mike who has considerable cattle expertise. The results speak from themselves.'

Right Premium prices are paid for young stock from the Scott's Limousin X herd.

Below A good temperament and easy handling are traits the Scotts look for in their bulls.

SHARING KNOWLEDGE - FHP RESULTS...

Local farmers, advisers and vets attended an XLVets organised meeting, hosted by Robert and Sue Scott, looking at the early results of their Farm Health Plan. Visitors were impressed by the high health status of the herd, the evenness of the store cattle and the high number of cattle which reach sale.

Farm Facts

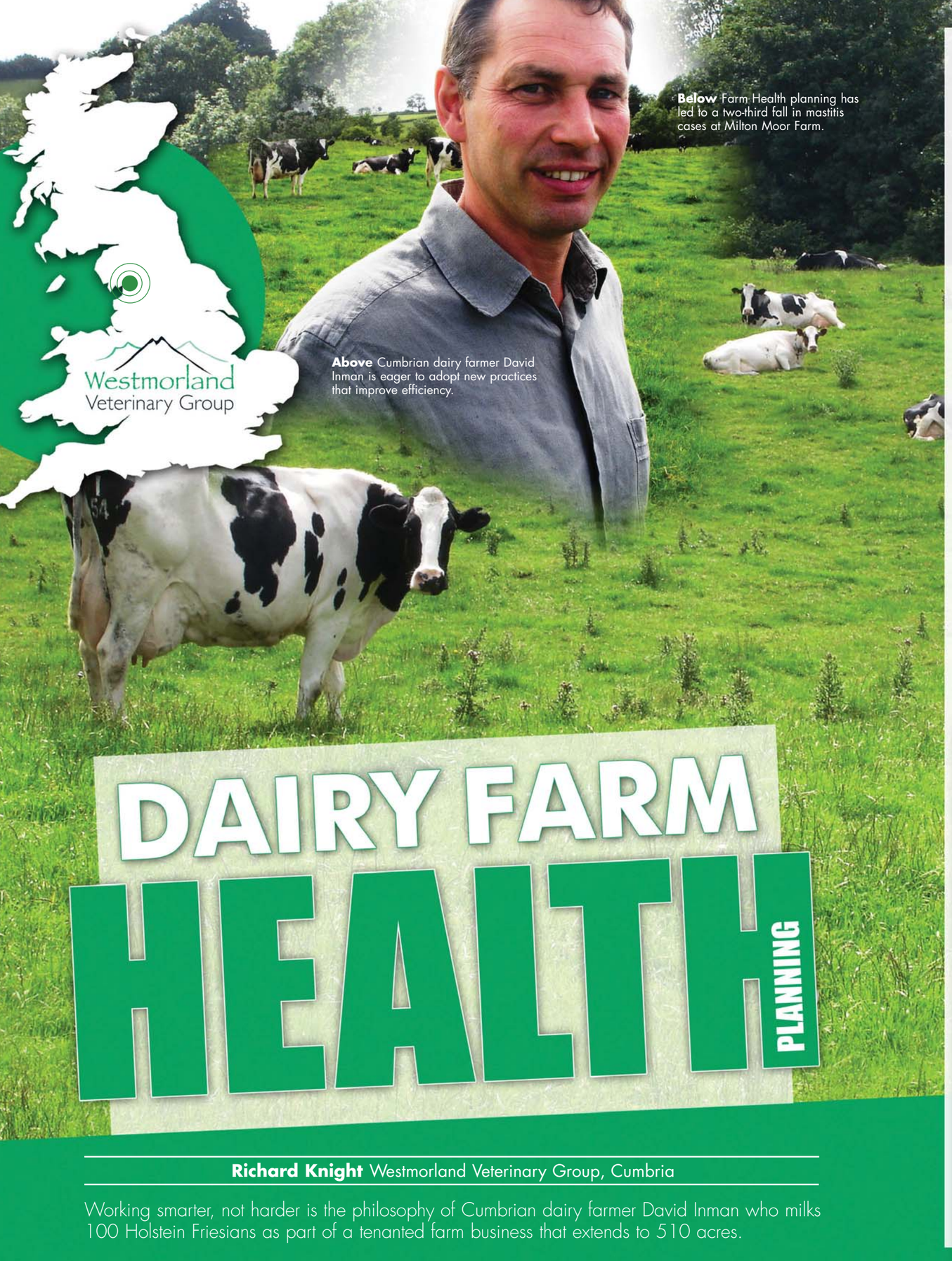
- 1,100 mixed acres across two units
- 160 cow Limousin X suckler herd
- Utilising home produced feed
- Outwintering a portion of the herd
- Closed breeding herd
- Achieving premium prices

Farm Health Plan Results

- Maintaining high health status
- Identified and tackled bovine coccidiosis
- Tight biosecurity
- Thorough bull selection
- Improved handling facilities

93%

The number of calves sold from cows put to service



Above Cumbrian dairy farmer David Inman is eager to adopt new practices that improve efficiency.

Below Farm Health planning has led to a two-third fall in mastitis cases at Milton Moor Farm.

DAIRY FARM HEALTH PLANNING

Richard Knight Westmorland Veterinary Group, Cumbria

Working smarter, not harder is the philosophy of Cumbrian dairy farmer David Inman who milks 100 Holstein Friesians as part of a tenanted farm business that extends to 510 acres.

Always eager to adopt new practices that improve efficiency and cut costs, Mr Inman and his wife Ann realised the benefits of working with a team of specialists to help improve the herd's health status, most notably cutting the high number of mastitis cases.

The Inmans took part in an initial 12-month Defra-funded Farm Health Plan project led by XL-Vets' Richard Knight of Westmorland Veterinary Group, near Kendal. Additional practical advice came from The Dairy Group's Ian Ohnstad and David Jacklin of Ruminant Nutrition Consultancy. And they continue to benefit from the advisers.

Average yield for the closed herd is 7,600 litres which is fed a TMR ration based on grass and maize silage and caustic treated wheat, topped up with high-protein concentrate through the parlour.

Bulk Milk Somatic Cell Count (BMSCC) for the herd was running at 227,000 cells/ml before the project started. In addition, monitoring from previous years showed clinical mastitis cases running at 95 per 100 cows with many repeats. However, as a direct result of the Farm Health Plan, year on year analysis showed a two-thirds fall in cases down to 29 per 100 cows producing an estimated saving of £6,800.

David Inman explains that despite all his best efforts, prior to the Farm Health Plan project, he had felt demoralised by the mastitis situation in the herd. 'Milk quality was down and milking times were slowed considerably. I'd got to the point were I needed to step back and reassess the day to day management of the herd.'

'You never stop learning in farming. The project has helped me personally and the herd results have been tremendous. The improvements have given me an extra drive after a much needed morale boost,' he adds.

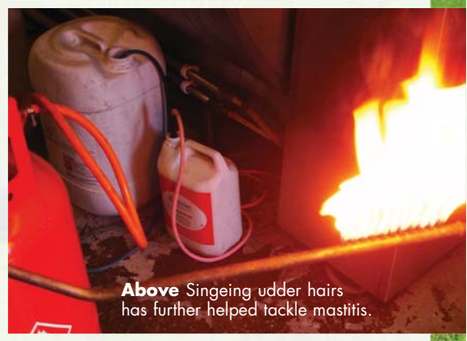
Tackling mastitis

Since mastitis cases tended to arise in the first 100 days of lactation, a renewed focus was placed on the dry period. A dual tube approach was taken with all the dry cows. Repeat offenders - cows with SCC above 400,000 cells/ml on four separate occasions - were targeted with additional treatments at drying off.

Several other management changes were made to reduce the bacterial challenge in the cow housing at Milton Moor Farm.

Udders were scored for cleanliness on a scale of 1 to 4 so that improvements could be seen and monitored (1 being completely free of dirt or very little dirt through to 4, classed as completely covered, caked on dirt). Richard Knight explains: 'The primary reservoir for contagious mastitis pathogens is the udder of infected cows. When the teats and udder are allowed to become wet and dirty, large numbers of these bacteria have the opportunity to infect the udder.'

Results of the first scoring showed a herd average of 3. A decision was taken to clip out tails and the upper back legs to prevent contact between the tail hair and manure present in housing areas. Udder hairs were also singed when cows went through the parlour.



Above Singeing udder hairs has further helped tackle mastitis.

Below Udder cleanliness has improved after changes made through the Farm Health Plan.

RICHARD KNIGHT WESTMORLAND VETERINARY GROUP **DAVID INMAN** DAIRY FARMER

Aligned to this, cow cubicle muck was brushed off in the morning and then a dusting of lime added to help kill off bacteria. And doubling the amount of sawdust applied to the cubicles was advised.

The combined approach helped lower overall udder scores by 1 point. 'This was a significant start in improving BMSCC,' says Richard Knight. "Research has shown that a reduction in the herd cleanliness score of 1 point can reduce BMSCC by up to 50,000 cells/ml.

'We're going to continue with the dual tubing, and we're regularly using the udder hair remover,' says Mr Inman.

The additional costs incurred - more sawdust, lime, the singeing operation, the teat sealant - were some £2,500. However, the group calculated that subtracting this amount from a £6,800 saving made by lowering mastitis has resulted in a £42 per cow net benefit.

Richard Knight points out that the benefits of the treatment programme are not directly related to the lower BMSCC for the herd. 'It has been the reduction of mastitis-causing bacteria and reducing cull numbers.'

Work by Ian Ohnstad has seen parlour hygiene improve and contribute to the fall in BMSCC. Spraying and wiping teats pre-milking followed by spraying post-milking is now common practice. And clusters are cleaned between high SCC cows.

Improved cow nutrition

Changes in dry cow nutrition were recommended to counteract a negative-energy-balance (NEB) which was affecting milk yield and conception rates.

Nutritionist David Jacklin placed grazing dry cows on a full TMR ration and cows were brought inside three weeks earlier than previously to adjust. David Inman was also trained how to use a hand-held blood monitor to test ketone levels in each animal.

This recorded Beta-Hydroxy-Butyrate (BHB) seven days after calving and provided instant feedback so that action could be taken to correct diets depending on the outcome of the tests. Monitoring after the diet change saw BHB levels reduced to normal.

What's more, other simple adjustments to feeding equipment like increasing the number of blades in the mixer feeder wagon helped improve the consistency of maize silage diets.

Mr Inman believes Farm Health Plans are crucial to running a modern dairy business. 'Many of the recommendations have been simple to put into practice. When things are made easy, they get done.'

XLVets' Richard Knight notes the continued hard work of David and Ann. 'They have taken on board the advice and have showed a steely determination in tackling the core health issues.

'Improvements in animal welfare and disease status, financial returns and improved staff working conditions have all combined to boost job-satisfaction.

'Looking forward, we intend to improve the nutritional transition of the cow from the dry to the milking state, and dry cow environmental management to further control mastitis,' he adds.

Left XLVets' Richard Knight calculates that mastitis control has saved £6,800.

SHARING KNOWLEDGE - FHP RESULTS...

A local MP was among those attending one of two farmer meetings designed to give people a far clearer understanding of Farm Health Plans and the role they can play in improving health, welfare and productivity.

The well attended meetings created enthusiastic discussion about many topics, the only limiting factor being time. The feedback was positive.

Milton Moor Farm Facts

- 510-acre tenanted farm
- 100 cow Holstein Friesian herd
- Producing 7,600 litres
- TMR fed grass, maize and wholecrop
- Closed herd using AI

Farm Health Plan Results

- A huge fall in mastitis cases
- Better milk quality
- Cleaner cow udders
- Improved dry cow feeding
- Significant cost savings
- Greater job and personal satisfaction

66

The reduced number of mastitis cases at Milton Moor Farm

£42/cow

The saving produced from reducing mastitis infection

Above Dual tubing dry cows will continue, such has been its success in mastitis control.
Below A hand-held blood monitor tests ketone levels post-calving.