

An open day at the Berry family's farm at Barton, Preston, saw the local vet team put the spotlight on how building design and cow and calf management can interact to help improve efficiency. **Jeremy Hunt** reports.

# Picking up pointers on Lancashire farm

**T**he Berry family's Boggart Holstein herd in Lancashire was the venue for a cow and calf health management day organised by veterinary practice Lambert, Leonard and May.

The herd has recently been re-housed in a carefully designed new cubicle building and switched from three-times-a-day milking to being milked by two Lely robots.

The first topic of the day was transition cow management. Reducing a herd's culling rate has been identified as one of the benefits of treating in-calf cows with a ketone bolus – and for a typical 200-cow herd it could mean a saving of more than £10,000, farmers heard.

Vet Tom Greenham said a bolus treatment given three weeks before calving triggered the rumen bacteria to produce optimum energy from the feed in the rumen.

It meant the rumen bacteria were working more efficiently to generate more



The new cubicle building has been carefully designed and features two new robots milking the herd's 120 cows.

energy without increasing the cow's intake of feed.

"In herds we sampled we found 30-40% of cows were suffering from ketosis, and it causes fertility problems as well as other knock-on health issues.

## **Ketosis**

"When comparing treated and non-treated herds we found there was a 70-75% reduction in ketosis problems but we also recorded a reduction in the cull rate by 50%."

Farmers were told that

although the £27 cost per bolus meant there was around a 25% increase in spend per cow per year, the cost was easily recovered through the benefits.

Estimated costings based on a 200-cow herd giving 8000 litres and with a cull rate of 25% showed if a third of the herd were treated with a ketone bolus it could lead to eight fewer cows being culled.

"Based on a replacement cost of £1300 per cow, that meant a saving of £10,400 compared to the bolus

cost of £1782 for 66 cows treated."

Vet Matthew Hylands said good early lactation performance was the main goal of a successful transition period, but to achieve that there had to be zero problems around or after calving.

"That means maintaining blood calcium levels and adequate energy intakes. So it is about the make-up of the diet and the intake of that diet," he said.

"But intakes can drop to almost zero at calving, even

though a cow's energy requirement to meet her milk production needs to rise at a much higher rate than the amount of feed she's actually eating.

"This often leads to a negative energy imbalance which means the cow has to dig into her own body reserves to meet energy needs. The fatty acid mobilisation needed to produce that energy creates suppression in the cow's immune system and leaves her more susceptible to post-calving problems such as mastitis and retained cleansings.

"A poor transition period means she is more difficult to get back in calf and extends her calving interval, which means she has longer time as a stale cow at the end of the lactation.

"She gets fat, and fat cows have a lower dry matter intake. As a result, her negative energy imbalance is



Farm host Philip Berry in front of the new cubicle house for the Boggart Holstein herd at Preston.

more serious, her immune suppression is worse and she is more likely to go down with post-calving disease problems. It's a vicious circle," said Mr Hylands.

### Cubicle management

The second topic was cubicle management. One of the least publicised advantages of robotic milking systems was that it allowed cows the opportunity to fulfil their optimum daily lying time. For most cows that was

around 14 hours a day.

Vet Rob Howe said: "Conventional parlour milking can mean a cow is standing up for an extra four hours a day which is taken out of her preferred time to be lying down. This puts pressure on feet and reduces time feeding and ruminating. It means for each hour less than the ideal 14 hours lying time, each cow loses around a litre of milk production per day."

The new unit at Boggart

House Farm originally used 'green bedding'. However, host farmer Phil Berry said: "Cows were lying too far into the cubicles and mucking on the back of the beds. This meant the beds were getting wet, cell counts were increasing and cow health was being affected."

So cubicles are now bedded on silica sand and cell counts have returned to an average of 150,000.

The silica sand costs £20.90 a tonne and the herd

## Herd fertility

»Routine vet checks can have a massive impact on herd fertility based on the regularity of the information collected about potential problem cows, said vet Den Leonard.

"Their aim is to get as many cows in calf as possible, and while there are many ways of trying to achieve that, it is the 100-day in-calf rate we feel is the most effective.

"And by visiting a farm

each week we can start to build up a much better profile of the herd's fertility and can get into problem cows much more effectively because we are responding more quickly. Problem cows should not be left for weeks and weeks," said Mr Leonard.

"Treatment should be based on a history of what's been happening so we can get to the root of the issue.

"A herd can soon be into

saving really big money if the number of open days are reduced. Our independent research into the actual cost of cows being open showed each day costs £5 for herds with a 385-day calving interval, but for herds with 440-day calving interval that can be £10 a day."

### Interval

Mr Leonard said even taking the lower milk price into account, these figures were

never less than £3 a day. Taking just 20 days off a cow's calving interval could save £60.

"The benefit of a regular vet visit at the same time on the same day each week is that the whole operation and farm team is zoned in to the job.

"No treatments are missed; they are all done at the right time to the right cows, so averages are much better."

is using 40t a month, said Mr Berry.

The guided robot system enables cows to come through to the feed passage, but the only way back to the cubicles is through the 'select' gate which determines whether cows are guided into the robot for milking or allowed back to the cubicles.

"Heifers are only taking two to three days to learn how to use the system. It's a system that maximises the efficiency of the robots," says Mr Berry.

The new unit has two robots milking the herd's 120 cows – split into two groups.

The herd's average in late August was 36-38 litres a



Vet Matthew Hylands: transition.

day, even though a high percentage of the herd were in late lactation.

"Before robots we were achieving an average of around 35 litres a cow. Now the aim is to get to 40-42 litres a cow. But from the cow welfare point of view this system is 10 times better than a conventional milking system," he said.

## Calf management

»Vet Ian Cure urged farmers to de-horn calves as early as possible to reduce trauma.

He explained calves endured pain for 60 hours after de-horning – this is information gleaned from trials which have measured the cortisol levels in calves' bloodstream which indicates levels of stress.

"Minimising stress levels avoids any adverse impact it can have on the calf's immune system, and so reduces the risk of pneumonia or scours post de-horning.

"The bigger the calves get

then the more painful de-horning becomes and the longer the pain lasts, so it pays to use pain relief."

He added: "Stress caused by de-horning can impact on calf growth rates, but trials have shown when the pain level is controlled by pain relief product Metacam, there is a weaning weight benefit of 10-20kg compared with calves which received no pain relief.

"De-horning calves using a local anaesthetic, followed by a jab of Metacam, can provide pain relief for 72 hours."