

24/7 heat detection looks set to push down calving intervals

# Full-time heat detector

'Sam and the cows' is an apt email address for this family run Lancashire dairy herd. But it's not just Sam Dickinson and his staff who are keeping an eye on the cows. There's now an extra pair of eyes watching the herd that operates 24/7 – with no holidays – and is looking promising as a reliable and accurate 'fertility manager'.

text **Karen Wright**

**A** calving interval of 410 days is Sam Dickinson's current target for his herd of 230 Holstein cows. He's looking to reverse the trend that has seen the interval increase to its current 426 days. Although this figure is still around the breed average, Sam feels that cows are not getting back in calf as quickly as they should and this is having an effect on annual and lifetime milk production per cow.

"We calve all year round," says Sam, who

runs the 225-hectare dairy unit at Blackrod, Bolton, with his parents John and Janet and his uncle Ernie Gregory. "We're fairly self sufficient, growing all our own forage, and do as much of the work as possible ourselves with the help of a staff of two full-time and two part-time workers."

Since Sam joined the family business nine years ago cow numbers have increased from 140 to 230 and a new cubicle house for 100 cows has just been completed. All

replacements are home bred and beef-cross calves are finished on the farm.

"We bred for increased yields and saw production step up to its current 9,000kg," says Sam. "But we're now on Altapreg and the emphasis is on longevity and lifetime productivity so we also look at health traits as much as production when we select sires."

## Silent heats

Sam is pleased with the herd's progress but is suspicious that one of the consequences of higher yields is more silent heats and a bigger proportion of cows not showing clear signs of bulling.

"We were routinely checking cows for bulling and using InterHerd action lists, so we knew which cows to look out for. But I wasn't convinced that they were all showing strong signs of bulling. As a result, I think we missed heats or weren't serving at the best time.

"The idea of using an electronic heat detection system appealed as it didn't



*Silent Herdsman collars on cows post calving*



Sam Dickinson recognises signs that show cows have come into heat

involve employing anyone else and, if it worked as it should and improved fertility, then it could easily pay for itself.

"I looked at the options but I'd heard good reports about NMR's Silent Herdsman, and what put it ahead of the others was the wireless technology and the ability to update the system very quickly and easily. Information can go in two directions – from the cow's collar to the farm computer and from the computer back to the collar. This means



that any updates in the system are transferred to our individual collars immediately.

"Also, the plans to incorporate lameness scoring into Silent Herdsman as well as other management measures really appeals."

Sam has 150 Silent Herdsman collars that he transfers from cows, once they're confirmed in calf, to newly calved cows. These have processors and take just two or three days to calibrate to the cow's normal movement pattern. Any changes from the cow's standard routine are picked up and transmitted through the antennae, which is on a girder in the cubicle house close to the milking parlour, to the PC monitor. This is happening 24/7.

#### No missing data

Cows at Aberdeen Farm are run in two groups and the high yielders are closest to the antennae. "It picks up movement 90 metres away and we know from the results on the PC that it's reading the collars well," adds Sam.

"And even though cows in the low yielding group that wander right to the

end of the building will be out of range, the information is stored indefinitely and transferred immediately upon the collar coming back in to range – so nothing is lost."

Sam and his team are now getting some encouraging and reliable results. "Since mid December I've been picking up cows on heat from the system. I check for changes before I start milking or when I'm passing through the office and I then cross check these with the InterHerd reports.

"I'm sure we're starting to catch more heats and serve cows on time. It's picking up the quiet cows that weren't showing obvious signs of heat, which is great news for us as it's these silent heats that were proving a challenge."

And this isn't the only benefit. If Silent Herdsman picks up heats early and cows can be served at the best time the number of services – and semen costs – should drop and annual milk production should increase.

#### Valuable 'extra'

But Sam is adamant to stress that Silent Herdsman is no substitute for herdsmanship. "It's not an excuse for a poor job. We still check the cows through the day and tail paint as well as keep a close eye on InterHerd records. But Silent Herdsman is a valuable extra aid to our fertility management.

"And we're learning all the time. Sometimes there's an early spike for increased movement then a big spike, which is when we need to serve her. It's this sort of thing we are now starting to recognise as we get used to the system."

It's early days for Sam, his team and the cows. CowManagement plans to revisit Aberdeen Farm in late summer and see if the calving interval has started to drop and if conception rate to first service has improved from its current 40%. "We're aiming to get as many cows as possible in calf within 100 days," adds Sam. |

## Key features of Silent Herdsman

Silent Herdsman is an electronic heat detection device. It combines a robust collar with a high performance processor that monitors movement, and a wireless radio that communicates with a farm PC. This provides an action list of cows that have come into heat.

The processor analyses all motion behaviour and gestures in 3D using similar technology to that used in air bags and the Wii games console.

Information then passes wirelessly to a farm base station. The robust link between the collar and the farm PC ensures that no data is lost.

For a 200-cow herd calving all year round and requiring 100 collars the cost of the collars, at £75 each, a base station, computer, software, installation and training would be around £10,000. NMR is offering easy payment terms.