

Benchmarking is key to improving fertility performance without intervention

Tip of the fertility iceberg

It's not all about preventing disease. Improving fertility and better performance monitoring has a role to play in controlling costs and reducing medicine use on many dairy units. We spoke to a leading fertility vet to find out more.

text **Rachael Porter**

The dairy industry is under continuing pressure to reduce the use of antibiotics and is making good progress with, for example, adopting selective dry cow therapy protocols. Fewer interventions with fertility treatments can also be good for the image of the industry – and producers' pockets. So says Wiltshire-based vet and fertility specialist Peter May. "I believe that it is equally important for our industry to reduce the amount of fertility treatments used in herds, because this is what I think consumers and milk buyers will be requesting and requiring in the future."

Peter is the founder of the Dairy Early Warning (DEW) group – a band of producers who benchmark their herds' fertility performance in a bid to improve it, with as little 'medical' intervention as possible. Mr May's passion for dairy fertility, and using benchmarking and monitoring to improve it, is fired by his belief that blanket fertility treatments, which are used routinely in many US herds, are bad for the industry's image.

Minimising use

"If you put every cow on a 'pre-synch Ovsynch re-synch' regime then you can achieve 100% submission rates, which will show a cost benefit to the producer. But I feel this is the wrong way to go," he says. "This approach is popular on large US and some Polish units that I recently visited. It made good sense in Poland, as the cows were housed in tie stalls and observing heats was difficult. When I saw it in use in Poland, I was encouraged to see vets examining the cows on the Ovsynch programme to check that the corpus luteum was 'good to go' before prostaglandin was given. This minimised drug use as much as possible.

"Looking at our benchmarking system, overall conception after a natural heat scores well as does conception to an observed heat after a single shot of prostaglandin. Conception rate after a CIDR synch programme also does well. "Cows scoring poorly on these farms are those that have conceived after Ovsynch has been given, or if they've then been 'fixed time' served after two shots of prostaglandin. With Ovsynch I think we need pre-synch to ensure that the corpus luteum is responsive to the prostaglandin, so maybe just go for CIDR synch – but only on those few cows that are really not cycling or are cystic.

"If there are lots of cows in this category then the vet and producer need to work together to find out why and 'correct' any management or nutritional issues that may be behind it – not just blast away with blanket use of drugs."

He says that treatments do have a place: "Typically I treat up to 10% of a block-calved herd, or up to 30% of an all-year-around calving herd, to initiate heat and service." But Mr May adds that their use must be targeted and their



Peter May: "Treatments do have a place, but use must be targeted"

success must also be monitored. This is where recording and benchmarking really come into their own.

Benchmark data

The use of valuable benchmark data and routine comparisons on farm has allowed DEW group producers to make significant improvements in their herd fertility. Table 1 shows the latest results, compared with the annual 500-NMR-herd benchmarking report, carried out by the University of Reading.

Mr May believes that it's key to monitor what you're doing and compare it to other producers. "Only then can you know if you're doing a good job. That's what's important, as well as knowing that any treatments that you are using are not masking a fertility management problem that, if left unchecked, will only get worse," says Mr May.

There's so much more to it than simply monitoring conception rates.

Table 1: Comparison of average and target values derived from the 500 NMR herd study in 2017, compared with the original study in 2010 (source: NMR/Pan Livestock 2017)

	average 2010	average 2017	target 'best 25%' 2010	target 'best 25%' 2017
percentage served by day 80	46	60	59	70
percentage conceived 100 days after calving	26	35	33	41
calving-to-first-service interval (days)	105	81	87	69
calving interval (days)	424	402	409	389
conception rate	32	34	40	41
percentage service intervals to 18 to 24 days	30	36	38	42
percentage service intervals >50 days	32	23	22	15
percentage eligible for service that served	27	38	37	49
percentage eligible for service that conceived	9	14	13	18
milk yield per cow per year (litres)	7,665	8,381	8,760	9,519



Perfect timing: identifying the optimal period for AI is key to improving pregnancy rates

“Recording needs to be more detailed so that the data is more meaningful. You need a complete picture. So record all insemination dates and separate out the conception rate where there’s been intervention. This creates a true picture of what’s going on in your herd.”

He says that there’s plenty of technology out there to help producers identify the missing piece, or pieces, in their fertility puzzle – without needing to rely on the blanket use of treatments. “Producers may resort to using synchronised ovulation products because they’re not seeing enough cows bulling. But if that’s the case then there’s something else wrong. If they don’t have the time to observe heats, that can be helped with heat detection technology.

“To me, if cows are cycling but the signs of heat are being missed, using synchronisation products is simply an unnecessary cost burden on the business. And, if signs of heat are not there, and there is a problem, that also needs to be addressed properly; not hit with a quick fix solution. I really don’t want to see UK dairy fertility management going to same way as that in the US.”

That’s why Peter May, with help from Reading University’s James Hanks on the computer benchmarking side, set up the DEW group in 2012 for his dairy clients. “It started as a club really – a way to be more progressive and proactive that was good for the practice, as well as our producers. It’s all about giving both vet and producer the opportunity to see the bigger fertility picture. It was interesting for both sides and we’ve learnt a lot together,” he adds.

Nutritional stress

Nutrition, for example, plays a key role. If cows are under nutritional stress, particularly in negative energy balance in early lactation, then fertility suffers. SARA also creates stress, as does other non-production related disease.

This stress impacts on the developing follicle and, with that in mind, treatment with fertility drugs would have a minimal impact. And it certainly doesn’t deal with the root cause of the fertility problem.

“Poor fertility is just the tip of the iceberg anyway, so to speak. It’s the signal that cow health, nutrition and stress levels need to be addressed. And doing so will bring other health, welfare and efficiency benefits, aside from better fertility.” |