One phone call away from auto PD testing using the milk sample

New PD milk test arrives

A long-awaited PD test using individual milk samples has arrived. Recommended as a follow up to a vet PD diagnosis, the new test is hassle free for both producers and cows and is proving highly accurate. And just detecting one or two lost pregnancies in a typical herd will justify the cost involved.

text **Karen Wright**

If making sure cows are in calf is high on your agenda – as it is with the majority of producers – then NMR's new milk pregnancy test will no doubt appeal. It can use the sample taken for milk recording and cows can be auto-selected for testing as required, say a number of days post service. Alternatively, kits are available for ad-hoc PD testing.

"Both options are non-intrusive – there's no stress for the cow," says NMR's Justin Frankfort who has been co-ordinating field trials with the new milk ELISA PD test. "And it can't be easier for those who milk record. One call to set up the automatic testing and that's it. Producers will get results back, normally within 36 hours of the sample reaching the lab."

Each PD milk check costs £3.50 using the recording milk sample. Alternatively, kits of 10 sample pots are available for £9 plus the £3.50 cost of the test.

"Test results come back as positive or negative," adds Mr Frankfort. "In our trial work we've found that 7% to 10% of cases report a 're-check', which NMR will do automatically free of charge."

Interestingly, diagnostic test specialists IDEXX, who developed the PD milk test, has seen an average re-check rate of 4% across samples from all stages of gestation with a higher number of re-checks observed, up to 12%, from 35 to 75 days of gestation declining to less than 1% after 75 days of gestation.

What's tested?

The new ELISA pregnancy test detects a protein produced in pregnancy – Pregnancy Associated Glycoproteins or PAGs. These PAGs are produced in the placenta by pregnant cows. "PAG levels change during gestation," says IDEXX's Hannah Pearse. "They are at their lowest level 60 days after calving then start

Preserved milk samples can be used for the new PD test

NMR's Sue Perry takes samples from Richard Blackburn's cows for milk quality testing then PD testing

Herdsman Jon Harris, Erika and Chris Bargh: a place for the milk PD test in this 160-cow herd

increasing after conception. We have shown that the ELISA milk PD test is 98% accurate for specificity and sensitivity."

Around 25 labs now carry out ELISA PD tests in the US and more are being set up globally. "In most instances, and because routine milk recording samples are being used, the test is used to confirm pregnancy around 75 days or later post service," adds Ms Pearse. "This means that the vet carries out the initial pregnancy check and then the maintenance of pregnancy is confirmed using the milk test.

"The cost of the test can be easily justified," says Mr Frankfort. "As many as 10% of cows will re-absorb embryos within 100 days of service. This milk PD test will normally pick these up before they get further into their lactation."

Proof of the pudding

NMR has trialled the new milk PD service alongside veterinary PD tests in cows in eight herds and found a 97% correlation in results.

Cheshire-based producer Richard Blackburn PD tested 260 of his cows with the ELISA test and the results were enough to convince him of the benefits of this new tool. "The correlation was excellent," says Richard, who runs a 300-cow Holstein Friesian herd, averaging 8,000kg on twice-a-day milking at Baddiley, near Nantwich.

"Cows are served from 50 days post calving then PD'ed by our vet Den Leonard about 32 days later. We're calving all year round and have a routine PD session every Monday.

"When we carried out the milk test on cows 70 days or more after service we found that two cows we thought were barren were actually in calf and one we thought was in calf wasn't. Just based on these results this extra PD test will have paid for itself for the year."

Valuable check

Richard is busy expanding the herd. A new shed is being built and he's buying in heifers with the aim of getting to 440 cows by next summer.

"The most important job now and in the future is getting cows in calf," adds Richard. "I wouldn't wait until 70 days to PD solely with the milk test, but it's a very valuable second check. We have a very efficient handling system built to the vet's recommendation that minimises PD time – so for us the vet PD check is still cheaper than the milk test.

"But a reliable follow up test, that uses milk samples and means less disruption for us and the cows, is perfect. We can set the NMR service to test routinely at 70 days post service and this will happen automatically."

"We expect most results to correlate with the vet's earlier PD test, but if not we can investigate before too much time has slipped away. The quandary is any 're-check' results but NMR will re-test these cows a month later free of charge or, if I pay, I could get this done by sending in an ad-hoc milk sample. There are plenty of options."

Place for milk PD test

Lancashire-based producer Chris Bargh can see a place in his 160-cow Holstein herd for PD testing his cows using the milk sample from 70 days post calving.

"We are very focussed on individual cow management right through the system," says Chris, who runs the family farm at Osbaldeston near Blackburn. "Our vet, Norman Johnson, routinely checks cows 20 days post calving then PDs at 38 days after service. It's a routine I value and it's good to get the vet to check over each cow at these crucial stages."

Chris has developed a high-input-high-output system and cows now average 11,000kg. Four years ago he installed three robotic milkers. These, and individual ration programming, have helped to increase yields.

While he admits that his calving interval is on the high side at 447 days, he can see that advances in management are bringing this down and a follow up PD check could play a part.

"We serve cows earlier now we are using the robotic milkers – the cow's are under less stress so they are fit and ready for serving at 60 days after calving. This, and increased PD accuracy, should help reduce the calving interval."

Accurate results

But the focus isn't totally on calving interval. Chris isn't too worried about getting one of his 20,000kg cows in calf 'on time' if her yield and overall performance is so good. "But I do need to know if she's in calf or not as it has a bearing on her feed and management. The milk PD test gives us this necessary extra knowledge.

"Our latest milk PD test results were very accurate and it does highlight the cows we need to look at. The re-check results were of no value though so it's essential that NMR offers a free re-check – it means that we will have a definitive answer and I'll know just where we are with herd fertility." |