

Data shows increase in days

Focus on cow health

Two cattle vets reiterate the importance of focusing on cow health when looking to safeguard and improve herd fertility.

text **Rachael Porter**

Both producers and vets have long known that there's a strong link between herd health and fertility. Any stress on the cow – be that from disease or lameness, poor nutrition or even a difficult transition period – will all have an impact on her ability to get back in calf, on target. “If producers want to stack the fertility deck in their favour then they need to make sure their cows are healthy,” says NMR vet Karen Bond, who has taken a closer look at the link between the two.

There's no doubt that poor health does have an impact on fertility. Any stress on the cow, particularly if it's as a result of disease or another health issue, will impact on her fertility. For a sick cow, reproduction is not key to 'survival' – her physiological priorities are fighting disease and healing.

“Disease results in inflammation – be that the udder with mastitis or the foot with lameness. And inflammation is a stress on the cow,” she explains. “If the cow feels sore or unwell, meaning that she's less able to graze or walk to the feed fence, this will then reduce her feed intake – creating nutritional stress.

“And all these factors combined will have an impact on embryonic development and maternal recognition of pregnancy.”

Clinical mastitis

Mastitis – both clinical cases and sub-clinical disease – has an impact on fertility. Clinical cases, particularly in early lactation when most incidents occur, will result in increased intervals to both first service and conception. “The number of services per conception also increases, as does the spontaneous abortion rate in early pregnancy. The pregnancy rate for these cows will fall and producers are more likely to cull a cow due to fertility issues if she's had clinical mastitis in her most recent lactation,” says Dr Bond.

Cows with sub-clinical mastitis or high somatic cell counts (SCCs) also experience a 'dip' in their fertility. “It can have an impact on the timing of their ovulation, with many experiencing irregular returns to oestrus and, again, a reduced pregnancy rate.”

The key issue with lameness, inflammation aside, is the impact that it has on the nutritional status of the cow and her body condition score. “Cows that lose condition due to lameness – they're not grazing for

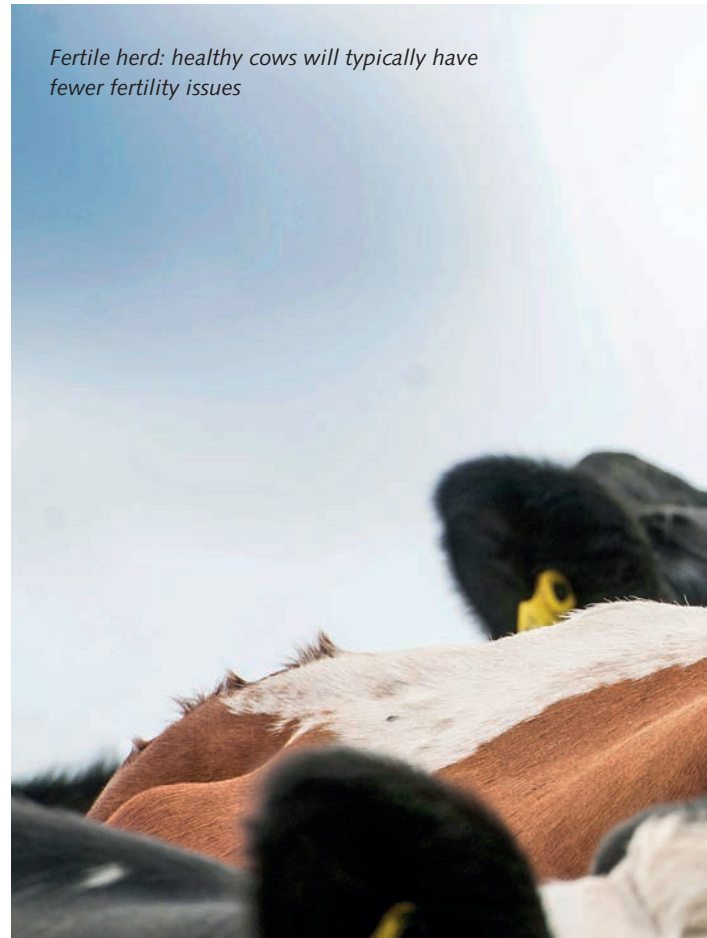
long enough or spending adequate time at the feed fence – will also see an increase in the intervals to first service and conception and conception rates will also be lower. The number of services to achieve a pregnancy will also increase.”

Risk factors

Vet Robert Smith, from the University of Liverpool, agrees that it's important to manage and reduce the risk factors for poor fertility, which include disease. “Not least because these cows also respond poorly to fertility treatments when vets and producers intervene,” he says. “Lame cows, for example, don't respond well to progesterone synchronisation.”

He explains that, during trials, the probability of a pregnancy following such treatment for cows with good locomotion (scoring 1) was high. Around 306 cows with locomotion score 1 responded to progesterone synchronisation treatment and 263 held to service. “The same can't be said for cows scoring 3 for locomotion. Just 39 responded and only 32 of those cows became pregnant. Lame cows not only fail to respond to the hormones, but also the quality of the egg produced is poorer.”

Fertile herd: healthy cows will typically have fewer fertility issues



to first service and conception

to safeguard fertility

Other work has shown that cows with high SCCs also take longer to ovulate compared to cows with lower SCCs. “The average number of days from prostaglandin treatment to ovulation was around 4.6 days for cows with a SCC below 100,000 cells/ml,” he says. “The average was 5.5 for cows with a SCC of more than 100,000 cells/ml. And the more health problems the cow has the less likely she is to respond to prostaglandin synchronisation.”

Preventative approach

Professor Smith adds that pregnancy losses in cows that have PD’ed positive are also higher in diseased cows.

With this in mind, Dr Bond says that to improve fertility producers shouldn’t forget the influence of cow health. “When it comes to clinical mastitis, producers should aim to minimise the number of cases, particularly in the month following conception. And they should also treat with a non-steroidal anti-inflammatory drug to reduce the likelihood of abortion by limiting the severity and duration of the inflammation.

“As for lameness – the focus should be on minimising

the negative energy balance that can occur when a cow is less able to graze or stand at the feed fence. Prevention is always best and rapid detection and treatment of lameness is vital.”

Bovine viral diarrhoea (BVD) is another disease that can have a significant – and serious – impact on herd fertility. “It will vary from cow to cow, depending on the time of infection,” says Dr Bond. “But typically the number of days open and the number of services to conception will increase. The rate of abortion and early embryonic deaths will also rise, as will still births and neonatal deaths. So, in terms of fertility, BVD is devastating.

“So detection and early removal of PI animals from the herd is vital. And vaccination can be well worth the investment for herds with BVD.”

Neospora is another disease that can have a considerable impact on herd fertility. “Biosecurity can help here – both introduced cattle and dogs play a part in Neospora issues on farm. And, again, producers must detect cattle that are Neospora positive as soon as possible. They should be managed or culled, accordingly, and producers should certainly avoid breeding replacements from them and perpetuating the problem.” |

