

INFECTIOUS DISEASE CONTROL AIDS FERTILITY IN BLOCK CALVING DAIRY HERD

Timed vaccinations are proving essential aids to maximising cow health and fertility for one Scottish block calving herd.

Regardless of system, cow fertility is vital to the success of any dairy farm, but add in the pressure of calving in a 12 week block and it is essential to avoid anything that can negatively affect fertility.

Although health and fertility has always been a key focus for Dumfries and Galloway farmer Mark Caygill, since making the move from all-year-round to spring block calving, BVD and IBR control have come firmly under the spotlight.

BVD can cause reduced fertility through high levels of abortion and returns, while IBR can lead to embryonic losses and general fertility problems. As such, keeping both diseases under control is crucial in helping Mr Caygill hit targets of 60% of the herd calving in the first three weeks of the block.

By working closely with farm vet, Will McCarthy of Galloway Veterinary Group, Mr Caygill has been able to significantly raise the protection of his herd. This includes mixing BVD and IBR booster vaccines under a recent licensed claim to allow greater convenience and reduced handling. Effective and efficient vaccination, along with improved biosecurity, is helping drive herd performance.

Mr Caygill says adopting a spring block calving system in his flying herd was a logical next step in a drive to improve farm efficiencies.

“We wanted to make the most of what we could grow on farm. We’ve always grazed well and achieved an early turnout so it made sense in terms of costs,” explains Mr Caygill who farms in partnership with wife Aileen at Blue Hill Farm, Auchencairn.

This is the second season the herd of 250 predominantly Friesian cows have calved in the spring. With the aim to calve over 12 weeks starting on 1 February, the Caygills are ensuring peak grass growth is matched with peak milk production.

Mr McCarthy says fertility is the key to making this kind of system work. “The first priority is getting grass to grow, the second is fertility and then lameness,” he says.

Although Scotland’s national BVD eradication scheme means BVD has to be controlled at Blue Hill Farm, vaccination is not a requirement of the programme. However, Mr McCarthy believes vaccination is crucial on all farms due to the fact it only takes one infected animal to cause a herd breakdown.

With all of Blue Hill Farm’s replacements and sweeper bulls being bought in, having a belt and braces approach to protect stock is essential. Vaccination timing is also crucial to success.

“To ensure maximum protection from BVD infection, cattle should have their full BVD vaccination programme completed four weeks prior to service,” explains Mr McCarthy. “Vaccination boosts immunity at this most important time and will reduce the effect of BVD on fertility and help prevent the birth of PI calves.”

An unborn calf can become a PI (Persistently Infected) when the naïve dam is exposed to BVD virus during early pregnancy. The calf is unable to mount an immune response and thinks the virus is part of its body. It is then born carrying and shedding the virus for life.

IBR vaccination is also an important part of the herd health plan at Blue Hill Farm. In the past the herd has displayed obvious signs of the disease at housing, such as snotty noses and high temperatures. As a result, vaccination is crucial to dampen down infection pressures.

Again, Mr McCarthy says timing is important to get the most out of the vaccine. As a result, a new vaccination strategy has been adopted since the herd began block calving. Now IBR vaccine is given in the spring as well as prior to housing.

With vaccination timing and comprehensive herd cover recognised by both farmer and vet to be critical to performance, the farm has been quick to take advantage of a recent licensed claim that allows MSD's Bovilis BVD and Bovilis IBR Marker Live vaccines to be easily mixed and given in a single syringe as a booster vaccine.

The value of being able to mix two important vaccines is not to be underestimated, given the pressure of work that inevitably occurs on dairy farms at the usual times of administration – typically turnout and/or housing. Additional investment in research and development is required by the manufacturer in this case, allowing benefits in on-farm efficiency, labour-saving and reduced stress on the animals by minimising stock handling and treatment.

“Being able to mix the vaccines has halved the work we have to do,” adds Mark Caygill. “We used to vaccinate for BVD and IBR on different days, but now we can do it at once.”

Mr Caygill also says the practicalities of vaccinating have become a lot simpler since moving to block calving. “All the cattle are now served in 12 weeks so it's easy to plan the vaccination programme,” he says.

The aim is to source heifers from BVD vaccinated herds – ensuring cattle have been vaccinated at least four weeks prior to service. All purchased stock are quarantined for two months on arrival.

The same attention to biosecurity is used when buying in sweeper bulls which are used after the herd has been AI'd for 10 weeks. Bulls will be blood sampled for BVD, vaccinated for IBR and BVD and quarantined.

As part of Scotland's BVD eradication scheme, herds must undergo regular surveillance testing for the disease. This could involve testing of 9-18 month old animals or bulk milk testing. However because calves are sold at a young age and bulk milk testing can be difficult to interpret in a vaccinated herd, the farm has decided to tag and test. This method of testing uses a specialist ear tag that automatically takes a tissue sample which is then tested to see if the calf is carrying the BVD virus and might be a PI.

PIs are one of the main routes of disease spread and as such, identifying and culling them is crucial to disease control. Blue Hill Farm has not found a PI for two years, however if a PI calf is identified, the dam will be blood tested and culled if found to be infected.

Mr Caygill says being able to identify infected dams in such a way means any problems can be picked up prior to breeding.

“Because we have a calving period followed by a bulling period, we can identify any PIs before breeding. That means we have no PI animals running with animals that are being served.”

With all stock served to British Blue or Limousin and calves sold on as stores or beef replacements, Mr Caygill says tissue tagging calves also gives him added confidence when selling.

“Tag and testing is also a way to get results from two generations as if a calf is negative, her dam must also be negative - that's the main reason for testing,” says Mr Caygill.



Mark Caygill works closely with Will McCarthy of Galloway Vets to maintain high health and fertility in his herd.