Improving calf health – an update

Testing for calf health is now available

Project aim

The Calf Forum Progress Report of 2009 included a case study ‘Improving Calf Health’, which described the result of a collaborative study between McDonalds, Arla and NMR (National Milk Records) and co-ordinated by The Food Animal Initiative (FAI). The study highlighted that, although there was good understanding amongst farmers regarding the importance of colostrum, the results of blood testing between 1 and 7 days were usually very low for immunoglobulins (IgG). IgG levels are currently the only effective way of determining whether a calf has received adequate passive immune protection from the dam. The link between colostrum provision and lifetime health in calves is well documented in the scientific literature.

The aim of the collaborative study was to develop a simple system whereby all farmers and their vets could easily gain access to farm trends in colostrum provision and thus reduce the risk of poor health in both dairy heifer replacements and calves sold into the beef chain for rearing and finishing. This colostrum provision testing system is now commercially available to all farmers and their vets.

The project also made the link between colostrum provision and Johnes disease. All cows in the study were individually tested for Johnes and classified as red, amber and green according to the risk of passing Johnes to their calf. This gave the farmers confidence to use large volumes of colostrum from green cows, making full use of this valuable and highly nutritious food source which has benefits far beyond the first 24 hours of passive immune transmission takes place. Management changes on all farms were put in place to lower levels of Johnes and to prevent transmission. Johnes testing costs £3.5 per cow and results are posted by NMR through Herd Companion.

How does it work?

The colostrum provision testing system has been developed in parallel with those systems operated by NMR for milk recording and payment (using individual or bulk milk samples). Results will be posted on Herd Companion. Blood samples can be collected on farm by 3 possible methods, all designed to keep cost to a minimum:

1. By the vet, ideally at routine visits.
2. Farmers can be trained by their vet to take samples from their own animals.
3. Some practices now have paraprofessionals working with them who are trained to take blood samples.

The recommendation is to sample approximately 20% of the calves produced to get good baseline data and then 10% on an annual basis. The ongoing sampling is vital in order to make sure changes in management, nutrition, weather conditions, disease outbreaks – all of which have been found to be factors - do not result in poor IgG levels. In addition, this information is valuable to those purchasing heifer replacements and male calves for beef finishing.

The following chart taken from the pilot web site shows how the results will be posted. Each dot represents a calf and when the cursor is floated over the dot the calf number appears allowing the farmer to relate back to his own records for investigation if necessary

Is it cost effective?

The cost of the IgG test will be £4 per sample which includes postage, packing, testing and posting on the NMR website. The cost to the farmer are the tubes and needles for sampling and the labour required (i.e., vet, farmer or paraprofessional) to blood sample. The average cost for taking a sample is estimated at between £3 and £15 depending upon how the sampling is carried out. Thus the total cost per sample will range between £7 and £19. Using the example of a 200 cow herd the initial outlay of sampling 20% of calves to get baseline data would be £280-760 and the annual cost for trends £140-380. There is no doubt that the information and comfort that this data can provide is cost effective when related to the stress, time and cost involved with treating sick calves. A major dairy vet practice estimates the average cost of treating a sick calf (conservatively) at £150 which will be compounded in many cases by loss of production following the illness. Trending IgG levels allows problems to be picked up and resolved quickly before further cost is incurred. Colostrum provision is not a panacea for healthy calves but to quote a well known veterinarian ‘it is vital to fill the tank before you embark on the journey’.
How do I get going?

For further information please contact NMR Customer services 0870622547.