

## Sheep news

So it will soon be Christmas and then the start of a new year. What plans have you got for your sheep business in 2022? If you are looking to invest in a handling system, EID reader, crate or even a remote camera so you can watch the sheep from the comfort of your bed (now don't judge!), the latest rounds of small equipment grants has just opened. It is now referred to as the farming equipment and technology fund. Here is a link to the main page Farming Equipment and Technology Fund—<https://www.gov.uk/guidance/farming-equipment-and-technology-fund-round-1-manual>



For those of you not sure which way to go the Future Farming Resilience Fund is providing farmers with free consultancy services. For more information click Future Farming Resilience Fund. Nineteen companies are eligible to provide support the list is available on the website.

For those of you who are about to scan your ewes, it is the perfect time to get your hands on and see what sort of condition they are in. Target condition score for this time of year are 2.0 for hill ewes, 2.5 for upland ewes and 3 for lowland ewes. The aim then is to keep condition steady till lambing. Keeping ewes in target condition score is crux of maximising production. At the latest flock health club meeting, we calculated that if your silage was of a poorer quality than expected, (9.5 MJME/kgDM vs 10.5 MJME/kg DM) ewes could lose a condition score in the last 2 months of pregnancy. That would severely impact lamb survival and early growth rates so the next job is to get your forage analysed and see what you have to work with! We also discussed what to focus on when looking for a ewe cake – protein is important but energy is key so look beyond the protein %. There are spaces on our flock club if you'd like to join –give me a ring.

Anyway here's hoping that lamb prices stay on the up in 2022 and wishing you a happy and healthy new year!

Judith

We've had a bit of a mixed bag of conditions this month, with the wet weather and cows now nearly all being inside. Scouring dairy cows have come up quite a few times already, with a few different causes found. We've had a couple of different types of Salmonella grown, some strains causing more illness than others. The historically more common strains of Salmonella dublin and Salmonella typhimurium can make animals very ill and appear to be septic, necessitating prompt treatment. There is a new kid on the block though, in the shape of Salmonella mbandaka. This mainly seems to cause a scour, associated with milk drop and poor appetite. Some cases of scour also occur in calves too. Symptoms from infection tend to occur at times of stress, such as in cows which have just calved, or suffered from mastitis, lameness or some such other condition. One outbreak reported by the SRUC (formerly SAC) linked it to the presence of BVD circulating in the herd and causing immunosuppression, which then precipitated the S. mbandaka scour. It has also been found in many places on affected farms, from dust to rodents, to normal cow faeces where the cow appears to be uninfected. It is often associated with feed contamination, with soya-bean meal, rapeseed, maize-meal and palm-kernel all have previously been identified as sources. We have seen other causes of scour too, such as liver fluke infection, and even one where the only discernible cause was rumen fluke infection. On top of that, there are a whole other gamut of causes from those such as coronavirus, to nutritional causes such as low digestible fibre. If this is something that is concerning you then it might well be worth some investigating.

The autumnal weather has brought along some calf pneumonia cases with it as well this year, as per usual. Just a reminder that we now have some pretty nifty investigative techniques at our disposal, not least of which is a PCR (polymerase chain reaction) test for various DNA fragments of infectious calf pneumonia agents. These tests commonly give us a 'hit' on causes and the presence of infectious agents when cultures come back sterile with no growth, and also for viruses and Mycoplasma species. They are extremely useful in formulating a plan and it is often prudent to do it each year to inform treatments needed. We usually collect them through a BAL (broncho-alveolar lavage), which is a small procedure when a collecting tube is inserted through a very small incision in the neck.

Richard Knight



## Reducing the Use of Antibiotics after Housing

**PNEUMONIA IS THE MOST COMMON CAUSE OF DEATH AND POOR PERFORMANCE IN DAIRY CALVES WITH 14.5% OF DAIRY HEIFERS FAILING TO REACH THEIR FIRST LACTATION**



Studies have shown that over half of all antibiotic treatments being given to calves on farms are treatments for pneumonia. The antimicrobials used in these treatments are often “long acting” formulations and recently there has been much debate in the media about the duration of antibiotics in human use and antimicrobial resistance (AMR).

Pneumonia treatments which often involve anti-inflammatories as well as antibiotics are most effective when given promptly. If

there is a delay in treatment, this will mean that more of the lung tissue will be affected and that more antibiotics are needed to try and cure the problem, often if treatment is delayed the animal will be left with chronic lung damage. The impacts of bovine respiratory disease can be massive on an individual farm in terms of significant production losses as well as death in severe cases. Even mild cases reduce calf growth, resulting in lower finishing weights and carcass quality for beef animals and poorer future milk yields from heifers or cows.

Bovine Respiratory Disease is a genuinely multi-factorial problem with many different causes and involves a complex interaction between the animal, the environment and the pathogens. The complex interactions between the animal and the environment act as trigger factors allowing the pathogens to infect and damage the lungs. It is vital to look at all three aspects when planning to reduce pneumonia and consequently reduce production losses and the use of antibiotics.



At housing the protection that spring born calves have received from colostrum is declining. They will have been kept outside in the same group since birth which means they have had little opportunity to be exposed to respiratory pathogens and build up an immune response. The stress of weaning can put further pressure on the animal's immune system. If possible animals should be housed on a dry day and kept in a similar age group. Mixing calves of different age groups increases stress for the younger animals. This is because they face greater competition for lying space, food and water. Older cattle can also be carriers of disease to which they have developed immunity and can act as a source of infection for

younger calves. Mixing of calves from different places should be kept to a minimum due to the possible spread of pathogens. If mixing does need to take place then this should be done in a well ventilated environment with a low stocking density.



Humidity can be very high at housing time (October/December) and the day

and night temperatures can vary considerably. Cattle produce lots of moisture and the aim of ventilation is to remove the damp stale air which is potentially laden with pathogens and get fresh air in without causing draughts. If a shed is overstocked all the calves will not be able to get the fresh air they need. Older cattle can cope with much lower temperatures than young calves, so providing plenty of fresh air is essential as long as it is not draughty.

Respiratory pathogens are the living organisms which cause pneumonia. They can be divided into viruses and bacteria and although the viruses are often considered the primary pathogens and the bacterial infections as secondary, the bacterial infections can often do more damage. Antibiotics have no effect on viruses but are used to slow the rate of growth or kill bacteria. Vaccines were initially developed against the respiratory viruses such as IBR, RSV and PI3 but more recent advances have meant there are now vaccines available against bacteria such as *Mannheimia haemolytica* and *Histophilus somni*. These vaccines are designed to reduce the effects of pneumonia and can be very effective, but without attention to the environment and animal management issues will not eliminate pneumonia.

Reducing the risk of pneumonia as well as the use of antibiotics in spring born calves involves trying to make best use of the animal's immune system to prevent disease occurring with the use of vaccination where appropriate. It also requires the responsible use of antibiotics if disease does occur.

Cara Hatfield