



nantwich
farm vets LLP

NEWSLETTER

MARCH
2021

This Month:

The NFV TB Team
CalfMatters Monitoring Project



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MARCH MADNESS



We are into March now and 2021 is well and truly in full swing. So far, it appears much the same as 2020 in terms of government regulations and COVID rules. I can only hope that pubs are serving again by the time those of you spring block calving / lambing are in desperate need of a refreshment! The same applies to the brave souls that have taken it upon themselves to home school!

A word about the weather never goes amiss; certainly there have been no slurry contractors short of work over January-February as we have seen artificial ponds and rivers come and go, and ducks and geese where there were none before. Being broken up with sharp cold spells and snow showers, it's worth mentioning that I have noticed a rise in pneumonia cases of adult cattle, even more so in calves who do not appreciate the variety of weather we have been seeing. Much of my time has been spent looking at coughing calves and you are not alone if you are someone who has needed to treat batches of calves this winter. It really drives home the importance of good calf housing and the selected use of vaccines to reduce the antibiotics

that we need in times like this. Vet Sarah Williamson goes on to explain more about the environmental monitoring equipment that is allowing her to make improvements to already excellent calf housing.

There's still very much a place for effective antibiotic treatment for calf pneumonia, though. Draxxin has long been a first-line choice on many farms, but has always required an additional injection of Metacam (or other anti-inflammatory drug). There is now a combination treatment of Draxxin and Ketoprofen called Draxxin Plus. It has the same low dose rate as Draxxin (1ml/45kg), but 50d meat withdrawal.

Within the practice, we have taken on two new team members, Will and Charlotte, who are becoming ATTs (approved tuberculin testers), to join Chloe, who some of you have already spent many hours with! Many of you will be meeting Will and Charlotte over the coming weeks as they complete their training to become qualified TB testers.

MEET THE TB TEAM

Unfortunately, TB testing is something that no farm looks forward to, at Nantwich Farm Vets we work hard to try and make the process as simple as possible.

Our farms are awfully familiar with a call from Melissa in our office letting you know that the dates are through for your TB test and booking it in for them. Melissa is backed up by Steph, and they are the key contacts within our support team for all things TB related.

As a practice we feel it's important that farms build a relationship with the person carrying out their test on farm, and for this reason all of our vet team carry out TB testing. This takes a bit of juggling to fit around clinical work, so for a number of years the practice has made use of specific TB testing vets to help share the burden of TB testing. We have had some excellent TB testers over the years but unfortunately it has been difficult to retain the good ones, especially as many have chosen to move into areas such as product exports since Brexit.

This was the reason that we were so excited to be able to get involved with the Approved Tuberculin Tester (ATT) trial in 2019. An ATT is a non-vet who is able to carry out TB testing. Many of you have met Chloe who was our first ATT, who also carries out Vet Tech work in addition to her TB testing. Chloe has proved to be a popular member of our team and is frequently requested by farmers. It is great to hear such positive feedback about a member of our team, though I think one or two vets were a little upset to hear their routine farms now prefer Chloe to do their TB testing over themselves!

We are now incredibly pleased to welcome two new ATT's to the Nantwich Farm Vet Team. Will Bailey, who we introduced last newsletter, started his training in January, and in March Charlotte Male is joining the team. We will introduce her properly next month.

New ATT's must undergo extensive training and supervision before they can carry out TB tests on their own. It starts with online training on everything from the legalities of TB testing to how to disinfect between farms! This is assessed with an online exam. A veterinary supervisor is nominated from our vet team, and they head out on farm together to carry out TB testing, having to test at least 500 cattle on 10 different farms. Case logs of these tests are kept together with the reactions they have seen. After a final practical assessment they have become a fully fledged ATT!

We are very pleased to be forming a team of ATT's to support our vets and farmers in carrying out TB testing. We would like to take the chance to thank all the farmers who have been involved in the training so far and for making our new team members feel very welcome at Nantwich Farm Vets.



IN FOCUS

#CALFMATTERS

CALF MONITORING PROJECT



Our resident calf expert, Sarah Williamson, explains the findings after on-farm monitoring of calf housing.

Last year Nantwich Farm Vets were pleased to be the first vet practice in the country to be involved with the Calf Matters monitoring initiative, supported by Boehringer Ingelheim. This involved using environmental sensors in calf housing to find out more about how the conditions vary at calf level and what impact this could have on calf health and growth.

The project involved a company with many years of experience in environmental monitoring in the poultry sector. Everything in the world of chickens must be very carefully monitored. Tight time frames in the poultry industry means that small differences in growth rates can have a big impact on that success of a batch of chickens. Poultry farmers carefully monitor their kill data to see the reasons given for carcase rejection. The poultry vet team shared examples of this, when an increase in rejected carcasses could be traced back to a cold spot in the shed. Temperatures for day old chicks are absolutely critical as if they are too cold they do not eat

and drink immediately. This means they are unable to utilise their yoke sack, which contains valuable antibodies, the equivalent of colostrum in mammals.

Clearly environmental monitoring on poultry units is incredibly useful, but what could we learn from similar monitoring in calf sheds?

FARM 1

The first farm we put the temperature monitors into was an autumn block calving unit, all of the calves were of a similar age, and would be staying in this shed until they are turned out the following spring. It is a large open sided building with six pens down each side of a concrete divide (Fig 1).



Fig 1: Farm 1 calf accommodation,



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The sensors were placed in electrical junction boxes with the ports removed, to allow them to be placed at calf level but also be calf proof. These were cable tied on to the gates at calf height.

We felt air speed was an issue on one side of the shed. Air speed is particularly important due to the impact it can have on the **lower critical temperature (LCT)** of the calves. This is the temperature below which the animal requires extra energy for keeping warm. The LCT for calves less than 3 weeks of age is 10-15°C and is highly affected by air speed. Just a 5mph wind at calf level can raise the LCT by 9°C. As the calves get older their LCT decreases, i.e. they can cope with colder temperatures, so LCT for calves over 3 weeks of age is 6-10°C. Store cattle can be comfortable down to sub-zero temperatures.

On the day we fitted the monitors the wind chill on one side of the shed was noticeable. Calves gathered around the edge of the pen for warmth (Fig 2). This was exacerbated by the fact that the gale breaker around the sides of

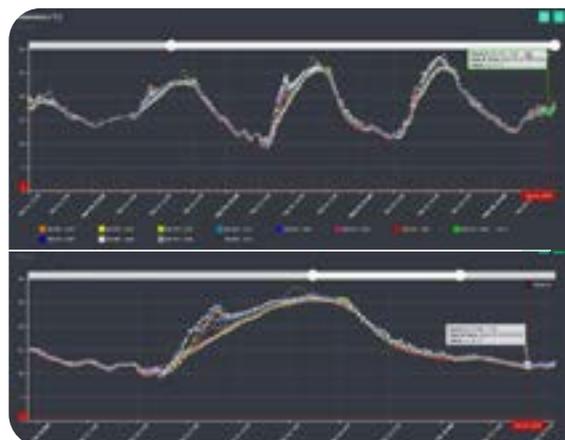


Fig 2: calves lying around the edge of a pen, indicating excessively low calf-level temperatures.

the shed had been raised up to allow last years calves to be fed silage at the feed barrier. The result of this was that though the air was relatively still at human head height, at calf level it was draughty. The farmer immediately rectified this by lowering the gale breaker to reduce wind speed at calf level.

The data from the temperature sensors is reported every 20 mins, and is immediately visible on the company's website. Each sensor shows a different colour trace on the chart. Figure 3 shows the first 3 days of data when the temperature varied between under 10°C overnight to 28°C during the day. It was interesting to see when we zoomed in on one particularly warm day in September (see Fig 4), it was possible to spot which pens received the morning sun first as the temperature rose in those pens first. There was also one pen which must have received direct sunshine at one point in the day, as the temperature spiked up to 28°C.

Fig 3: Farm 1 temperatures over the first three days
Fig 4: detail of one 24-hour period (Fig 4).



We wanted to ensure that the calves were receiving sufficient energy in their milk feeds to keep warm, maintain growth rates and run their immune systems. We used the calf milk replacer calculator produced by the University of Nottingham (you can search for this on the AHDB website). Data was inputted which included the weight of calves, the volume, concentration and quality of milk powder plus the temperatures in the shed. We concluded that this farmer was feeding a good quality milk powder in sufficient quantities to achieve the desired growth rates.

We also had some fun trying different types of environmental enrichment for calves. We suspended some small space hoppers in the pens and were pleasantly surprised how much the calves interacted with them. It was even more exciting to see space hoppers appearing on lots of other farms too as we shared this on social media!



FARM 2

We recently moved the sensors to a second farm, this time an all year round calving unit that has a range of calf accommodation. We also put sensors outside of the buildings so we can



Fig 5 and 6: Farm 2 outside temperature (Fig 5) and calf-side temperatures in different housing types (Fig 6)

compare the external temperatures to the temperatures in the calf pens.

Figure 5 shows the recent outside temperature data (orange and yellow lines) which, for a particular 24 hour period, were under 3°C, day and night. Compare this to some of the pen temperatures (Fig 6), the warmest pen being inside a group igloo (lime green), with neonatal pens (red) and beef calf accommodation (blue) often a whole degree or more colder.

This farm does an excellent job of helping the calves keep warm so they can use more of the energy from milk for growth. Over the winter all calves are given calf jackets as soon as they are moved into the calf pens.



Fig 7: Farm 2 keeps calves warm using calf jackets, straw bales as shelter and deep straw bedding

All calves are bedded in **deep, clean, dry straw**, which allows them to nest down in the straw to help keep warm. Calf nesting is scored on a 3 point scale, with a target of score 3 when the calves legs are not visible when they are lying down (see Fig 8). What nesting score would you give your own calf accomodation?

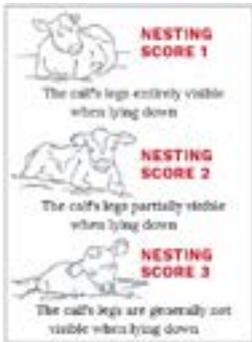


Fig 8: calf nesting scores (image from calfcare.ca)

Calves are provided with the opportunity to shelter and create a microclimate for themselves by placing a large straw bale in the pens and the large group igloos. So far from the data it is clear that the group igloo does a good job and appears to be the warmest of the groups on the farm.



Fig 9: Group igloos provided the warmest accomodation on Farm 2

We are going to continue to monitor this farm over the next few months and will be sharing regular updates on our social media.

A big thank you to both of the farm teams that have been involved with this interesting project and to Boehringer Ingelheim Calf Matters for the continued support in this area.

FURTHER RESOURCES:

The AHDB Calf Management booklet gives a great overview of all aspects of calf rearing.

Visit www.calfmatters.co.uk for further info, webinars and more to help tackle calf health on your farm.

COURSES

ONLINE MEDICINES COURSE **Wednesday 24th March**

These courses include covering correct administration of medicines and avoiding residues and fulfill all the requirements for Red Tractor Farm Assurance. If you are interested or need to attend one of these courses, ring the office to get your name on the list.



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