Three Rivers and Chapelfield FARM VETS

May/June NEWSLETTER!

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Welcome to the May/June newsletter of 2023!

In this issue we look at Semen Testing in Bulls including pre-testing evaluations, collection methods and examination of your Bulls during this period.

We also investigate the ways you can prevent Weakness in Lambs by looking at colostrum amount & quality, sourcing & storage, using the right equipment and identifying infectious diseases so that lamb survival is increased.

Please let us know what you think of these topics and any others you would like us to cover in upcoming newsletters

Get in touch at reception@trandcfv.co.uk

See you next time,

The team at Chapelfield & Three Rivers Vets

In this issue:

Semen Testing in Bulls

There can be several challenges to keeping a fit and healthy bull, including having a sub-fertile bull that can struggle to get animals pregnant, which can become costly and have many knock-on effects with your wider herd. Find out more about semen testing and the benefits it can have when planning ahead.

Weakness in Lambs

There are many ways to help prevent weaknesses in lambs, from ensuring the health of the ewe beforehand to the equipment used to store colostrum given to the lambs in the first few days and weeks. We investigate a range of factors that can lead to weaker lambs and what you can do to prevent them during the season.

Semen Testing in Bulls

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Keeping a bull can be extremely expensive and the costs associated with a fit, healthy, fertile bull sit at around £1000 per year. On top of these associated costs, a bull can develop health problems or can have fertility problems.

While complete infertility of bulls is rare, sub-fertile bulls are relatively common (approximately 20% of bulls tested are sub-fertile). A sub-fertile bull will get some animals pregnant, but it will take several services and therefore more time.

The knock-on effect annually of cows calving later and later is costly. Batches of calves with a huge age range are more likely to have problems with pneumonia and scours, not to mention reduced DLWGs (Daily Live Weight Gains). Fundamentally, if bulls are born later in the calving period, they are lighter at weaning and have a lower value. At £3/kg, a 21 day cycle later is a reduced calf value of £50-60 per calf.

Bull Breeding Soundness Evaluation

The Bull Breeding Soundness Evaluation performed 6-8 weeks prior to the service period allows you to identify and screen out sub-fertile bulls. All bulls you intend to use should be tested before use.
This really should be a regular (at least annual) routine on beef breeding herds and will give you valuable information on how your bulls will breed during the year. It will also allow you to make the best use of the bulls you currently have.

Testing 6-8 weeks before mating allows time for any re-tests, or more importantly, time to find replacements, or juggle around the mating groups if any bulls are identified as sub-fertile. Pre-sale fertility testing can also be carried out and the bull can be accompanied to sale by a BCVA bull breeding certificate.

Semen collection methods

Electro-ejaculation is now the safest and standard method of semen collection used by trained veterinary surgeons in the UK. The procedure is quick and safe providing an appropriate crush is available.

The semen is evaluated on farm and in the lab at the practice. The semen is scored for volume, concentration and contamination before being examined under a microscope. Under the microscope, the sample is examined for gross motility and motility of individual sperm cells. A sample of the sperm cells is stained and back at the surgery the morphology of 100 sperm cells will be examined.

Examination of the bull

Before entering the crush, the bull's gait is observed and during the crush the feet are properly inspected. He gets a full clinical examination of external and internal reproductive organs, and testicle size is also measured. This reflects directly on semen reserves and also reflects the fertility of any subsequent daughters.

After manual stimulation of the internal sexual organs a probe is inserted and gentle electro-stimulation is applied until ejaculation occurs.

It has become clear that an annual bull fertility check can be very beneficial, as bulls can become sub-fertile at a later age. Most farms spend a lot of time and money checking their cow fertility, so why not also pay attention to their bull fertility, which is equally vital for securing a positive outcome.

Weakness in Lambs

Correct birthweight of lambs has been shown to be directly linked to lamb survival. A lambing project in 2010/11 found that 11% of lambing losses were at 2-11 days of life.

Making sure the ewe is getting the right nutrition during the last third of pregnancy and is the correct body condition at lambing is essential. Thin ewes during this period produce lambs with less brown fat which means that they are at higher risk of hypothermia and the ewe's mothering behaviour is reduced.

Litter Size	Target Birthweight (kg)
Single	4.5-6
Twin	3.5-4.5
Triplet	>3.5

Forage analysis is also crucial for accurate planning of concentrate supplementation for the ewes. Lower quality forage will result in the need for more supplementation of concentrates. Step rate feeding over the last 6 weeks of pregnancy will reduce the risk of ruminal acidosis when feeding larger volumes of concentrates compared to flat rate. To review ewe nutrition, ewes can be blood sampled 3 weeks before lambing.

Colostrum amount and quality

Lambs should receive 50ml of colostrum per kg of bodyweight within the first 2 hours of life. This should be repeated after 2-4 hours. Knowing your average birthweight of lambs will help you know how much colostrum to feed when you do need to intervene.

It is too time consuming and impractical on farm to be tube feeding colostrum to every lamb and in most scenarios, we can't measure how much the lamb has drunk. Careful monitoring of suckling in the first 4 hours of life is essential. It is shown that 90 to 95% of lambs that suck within 15 minutes of birth are shown to survive to 90 days of life.

It is quick and easy to ensure the quality of colostrum the lamb receives. Ewes with a good plane of nutrition, good access to the feed face and optimal body condition scores have been shown to produce better quality colostrum.

Large ewes need 15cm per head of ad lib forage feed space and 50cm per head of concentrate feed space. Again, whilst we may not be able to test the colostrum of every ewe, we can start by taking samples from any ewe we've has to assist with lambing, ewes with poor condition scores and those with poor udders.

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Using the right equipment

Using a BRIX refractometer gives you an instant result that you can act upon by either letting the lamb drink from the ewe or supplementing it with better colostrum.

Colostrum should be a minimum of 26% in sheep (compared to 22% in cattle). Anything below 26% should be discarded and not be fed to the lambs. A helpful how-to guide of using the BRIX can be found on the AHDB website. A BRIX refractometer is quite cheap to buy and can be purchased online with next day delivery.

Colostrum sourcing and storage

As ever, colostrum from a ewe is always better than bought in powdered colostrum, but powdered colostrum is better than nothing (and normally the more expensive it is, the better it is).
Colostrum from ewes on farm will contain antibodies that fit the disease profile of your farm, better protecting your lambs. Ewes with plentiful, good quality colostrum (that has also sufficiently fed its own lamb) can be milked out and stored for future use, such as feeding triplets.

Colostrum from other animals e.g., a cow, is not best practice as it can cause some health issues as well as the antibodies not lasting long enough until the lamb is able to produce its own immune response. Colostrum is best stored in small quantities (such as in an ice cube tray) to make it easy to defrost and convenient to use in the quantities it is needed. Once harvested it should be put into the fridge/freezer quickly to prevent contamination and bacterial replication. Colostrum can be stored in the fridge for up to a week and in the freezer for 6 months.

All equipment used to harvest and store colostrum should be thoroughly cleaned and well maintained to prevent contaminating colostrum. Defrosting should be done slowly in a warm water bath, not in boiling water or in the microwave. The colostrum should be given at 38°C; over 42°C and the antibodies will be destroyed.

Trace Element Deficiency

Weakness in lambs can also be caused by Trace Element Deficiency. Due to their high growth rates, lambs have a much higher requirement for minerals, and therefore experience dietary deficiencies quicker than adult ewes.

Copper deficiency in pregnant ewes leads to 'swayback' lambs, either at birth or 4-12 weeks down the line. They present with weak hindlimbs that progresses to paralysis. Prevention is better than cure regarding copper deficiency as the damage is irreversible. The best way to diagnose this condition is by post-mortem examination of the affected lamb.

Selenium deficiency leads to white muscle disease in fast growing lambs around 2-6 weeks old. Unlike copper deficiency it is treatable with an injection of potassium selenate. It is again preventable either by supplementing the ewes in late gestation or injecting all neonates with selenium and vitamin E.

Infectious diseases

Infectious diseases can also cause weak new-born lambs. As mentioned above, good quality colostrum is vital along with good hygiene in the lambing shed to prevent diseases such as watery mouth, which occurs within in the first 72 hours of life.

Abortive agents can also cause weak lambs as well as still births. Toxoplasma gondii, if not causing mummified foetuses and stillbirths, causes weak sickly lambs that normally die. Toxovax administered pre-tupping is important in flocks, and sheep that have been infected retain immunity for life. This means retaining these ewes in the flock is sensible economically as they will not require vaccination and will not abort from Toxoplasma again.

Chlamydia abortus (EAE) can likewise cause weak lambs that typically die within 48 hours of birth. Enzootic abortion vaccines given at least 4 weeks pre-tupping is the best strategy for reducing EAE incidence on farm.