

Happy New Year

Happy New Year from all at Wright & Morten! We hope this year will see us moving back to some form of normality, though rest assured we will continue providing the same service we always do whatever the challenge. With the uncertainty of what is coming in 2021, we will continue to work with you to make your farms as successful as possible. Here's to a healthy and prosperous year for you all!

Product Updates

There are some challenges in the supply chain at the moment, with the main being border/transport and production issues due to COVID. We are also expecting some disruption with Brexit in the new year. A few products are unavailable due to issues in the production facilities, so we may have a few new names for you to get used to as replacements. If anything is drastically different, we will make sure it is flagged up, but please check the box/bottle when using to make sure you are using the correct dosage, route, and withdrawal period. We always endeavour to source a direct equivalent where one is available, however for certain products this is not possible.

Pre-lambing Nutrition

Perhaps the most important factor in many of the disease seen in both ewes and lambs at lambing time, is ewe nutrition. Ewe body condition pre-lambing has a huge impact on lamb survival not only this year but can impact fertility in the autumn and lamb survival next year. Twin lamb disease and hypocalcaemia are the two major issues seen with thin ewes, with twin lamb also often affecting over-conditioned ewes. Prolapses occur in over-fat ewes, or those carrying multiple large lambs – which could potentially result from over feeding concentrate prior to lambing producing large lambs.

Protein and energy are the two critical ingredients in the diet which need to be supplied correctly. This mean supplying the right amount and good quality protein, and adequate energy. In the run up to lambing, we recommend taking blood for metabolic profiles from a few twin/triplet bearing ewes, about 3-4 weeks ahead of lambing to monitor their protein and energy intakes. Testing at this point allows changes to be made well enough in advance to have a positive impact by lambing.

Protein is key when it comes to lamb growth – getting healthy birthweights – and for colostrum production. Inadequate protein leads to lower colostrum quantity and quality, which can lead to increased cases of joint ill, watery mouth and reduces growth rates for the lambs going forward. Getting ewe nutrition right can mean lambs thrive in the spring and summer months, with a stronger immune system and higher growth rates.

If you would like to discuss ewe nutrition or metabolic profiles pre-lambing, have a chat with any of the vets and get a plan in place.

Contagious Mastitis (cow to cow)

Contagious pathogens that cause mastitis tend to live on the cow's udder and skin of the teats and transfer from infected cow (or quarter) to uninfected cows (or quarter) during milking. They adhere easily to the skin, colonising the teat end and then 'grow' into the teat canal, where infection occurs. Contagious organisms are well adapted to survival and growth in the mammary gland and frequently cause infections lasting weeks, months or years.

The major contagious pathogens are:

Staphylococcus aureus

Streptococcus agalactiae

Streptococcus dysgalactiae

(**Strep uberis**) – can also act as an environmental pathogen.

The main features of bacteria classified as causes of contagious mastitis are:

- Persistence of infection within the udder of an infected cow (e.g. Staphylococcus aureus)
- And/or the ability to be shed in very large numbers from an infected quarter (e.g. Streptococcus agalactiae)

There are two basic principles of mastitis control

- **Elimination of existing infections** – by treatment and possibly culling.
- **Prevention of new infections** – management to prevent the spread of infection.

The traditional Five Point Plan helps to reduce the number of mastitis cases and to cure infected cows.

The five point plan:

1. Treat and record all cases of clinical mastitis.
2. Perform post-milking teat disinfection of all teats immediately after every milking.
3. Implement appropriate dry cow therapy using sealant with or without antibiotic based on discussion with your vet.
4. Cull chronic cases of mastitis.
5. Carry out regular milking machine maintenance.

Reducing the risk during milking

- Bacteria in the milk from infected quarters can spread to other quarters by splashes of milk during stripping, by milkers' hands, by teat-cup liners and by cross-flow of milk between teat cups.
- Hands and old pairs of non-disposable gloves are a risk factor for mastitis. A new pair of clean, disposable gloves should be worn every milking.
- A consistent milking routine will help reduce the risk of spreading mastitis pathogens. Aim to put clusters on clean, dry teats: wash the teats, then wipe dry with a clean dry cloth or towel. Only use single-use towels, to avoid transfer of pathogens between cows.
- Use an effective **post-milking teat dip** and cover most of each teat (at least the bottom 2/3). Discard teat dip left in dip cup at end of each milking, rinse cups with water after every milking and dry.
- Use running water and disinfectant solution to remove infected milk from gloves, liners and other equipment.

Controlling contagious mastitis

It is important to **identify** cases of clinical mastitis as quickly as possible in herds with a contagious mastitis pattern.

- Early **treatment** increases the likelihood of effective treatment
- Early **identification and removal** of affected cows reduces the risk of both the spread of infection and increasing bulk milk SCC (BMSCC)

Foremilk stripping is the most effective way to identify clinical cases. Be extra vigilant during periods of high risk – for example, in the first 30 days of lactation. Check that all staff know what signs of mastitis they are looking for and how to respond. They should also be looking for swollen quarters both at cups-on and cups-off.

The **California Milk Test (CMT)** can be used to detect which quarter(s) are likely to be affected and targeted for treatment with intramammary antibiotics. This is especially helpful for subclinical mastitis. The reaction is scored on a scale of 0 (the mixture remaining unchanged) to 3 (an almost-solid gel forming), with a score of 2 or 3 being considered a positive result. The CMT will only show changes in cell counts above 300,000.

Use milk **records** to identify high SCC cows.

Cows with clinical mastitis

- Treatment with intramammary tubes should start immediately for the first case in lactation. Agree a treatment plan with your vet. Take a milk sample prior to treatment and store in the freezer. This can be sent off for culture and sensitivity if required.
- Cows must be clearly marked
- Record all mastitis cases accurately – by cow, quarter and date. Regularly review cures rates.
- If possible, segregate clinical and subclinical cows away from the rest of the herd. Milk these last.
- If not milked last, cows with clinical mastitis should at least be milked with a separate cluster. This cluster should not be used to milk freshly calved cows or cows with milk out of the tank, for reasons other than mastitis.
- Good hygiene is important when administering mastitis tubes. Milk the cow out completely first. Then, wearing clean gloves, ensure the teat has been thoroughly cleaned and disinfected before inserting the intramammary tube. Carefully insert the tip of the injector into the teat canal and gently empty the contents. Dip or spray the teat afterwards with a teat disinfectant.
- Anti-inflammatory drugs are really important when treating mastitis, if the tube you are using doesn't contain an anti-inflammatory give metacam (has a 3 day duration) or ketofen (has a 24 hour duration) alongside the tube.

The importance of dry cow therapy

The dry period is a critical time for udder tissue repair and the formation of fresh udder tissue ready for the next lactation. Often the best time to achieve cure is during the dry period, especially for staph aureus bacteria. One dry cow antibiotic tube per quarter is sufficient and should be administered immediately after the last milking of lactation.

A significant number of new infections are contracted during the first two weeks and last two weeks of the dry period, hence the use of teat sealant.

In high-cell-count herds we can consider reducing the cell count threshold for antibiotic dry cow therapy, though this is best done in discussion with your vet. Using a low SCC threshold and three consecutive monthly milk recordings will increase the chance of identifying infected cows in the herd.

Key Performance Indicator. Cure rate in dry period 85% or higher (cell count high in and low out).

Chronic mastitis and infection control

Cows with chronic mastitis, which are unlikely to recover, should be culled. Chronically infected cows are likely to be a source of bacteria for other cows. Culling infected cows removes the risk that they will spread infection.

Culling is not a way of controlling contagious mastitis unless the spread of mastitis within the herd has also been controlled.

Antibiotic DCT does not cure all existing infections. Cure rates are lower for older cows with chronic infections. Consider culling cows which have had:

- Three or more cases of clinical mastitis in a single lactation
- Persistent high SCCs in two consecutive lactations, despite treatment with antibiotic DCT in the dry period in between.

Milking routine

1. Wear disposable gloves
2. Give pre-milking teat disinfection enough time to work – over 30 seconds
3. Lag time of 60-120 seconds from manual stimulation to cups on
4. Put teat cups on calm cows with clean, dry teats
5. The majority of the teat skin of every teat should be completely covered with post-milking teat disinfectant at the end of every milking

Milking machine maintenance

The milking machine is arguably the most important machine on your dairy farm. If your milking machine is not working properly, it can damage blood vessels and lead to hyperkeratosis at the teat end, limiting the cow's natural defences against mastitis. It is critical that the milking machine is regularly serviced and maintained.

Parlours require a minor service every 750 operating hours and a more significant service every 1,500 operating hours. A 250-cow herd milking for 7 hours a day will need a major service every 215 days.

Liners should be changed after approximately 2,000 milkings



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