



## Coughing Cows

Respiratory disease in cows at grass is a problem that is arising more frequently in the last number of years. Many cases are due to lungworm and respond to



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epinomectin well. These uncomplicated cases usually resolve quite quickly, cows can come back up in milk and the coughing will ease off and eventually stop after a couple of weeks. It is the herds that do not respond to dosing or partially respond that can be challenging and frustrating.



## Lungworm

Lungworm is arising more often in dairy herds than it did in the past and there are many reasons for this. Our grazing practices work in favour of lungworm

and other parasites, also our overuse of anthelmintics can lead to poorer build-up of immunity in young stock and loss of immunity in cows. Anthelmintic resistance in stomach worms has been well proven in trials around the country, anthelmintic resistance in lung worm has not yet been proven but if it exists it would explain why a poor response to treatment, in certain situations is being observed.

## Other causes

Other infectious agents that contribute to respiratory disease in cows include viruses (like IBR, RSV, PI3, Coronavirus), bacteria like (Manheimia haemolytica, Histophilus somni, Mycoplasma bovis) and Tick-borne fever (Anaplasmosis). IBR is a virus that should be monitored and controlled in all dairy herds. The marker vaccines that are available work very well and if the correct vaccine protocol is followed, and used in cows, maidens and calves, the virus can be eliminated from the herd. The bulk milk vaccinated test is an excellent way of monitoring progress, whereby the level of wild antibodies should fall year on year.

RSV and PI3 are present in every herd and usually cause disease in calves and weanlings. Every bulk milk test will come back positive and every blood taken from a cow will come back positive. This means that every adult animal has been exposed and should have immunity, generally this is the case. However, in times of stress or in conjunction with lungworm infection, these viruses can reactivate, start circulating and start causing disease.

Manheimia haemolytica and Histophilus somni are two bacteria that are naturally found in the tonsils of all cattle. It is when they make their way to the lungs that they contribute to respiratory disease and cause bacterial pneumonia in cattle. They usually follow after a viral or lungworm infection and rarely work alone. However once established they can cause chronic pneumonia and coughing in cows. Cows with respiratory symptoms that respond quickly to antibiotics generally have bacterial involvement. Mycoplasma bovis is another bacterium that may be present in your herd (see below) and can be involved in respiratory disease.





Anaplasmosis or tick-borne fever is a bacterial disease spread by ticks. Infection is usually accompanied by high temperatures, severe milk drop and often coughing. Control involves minimising exposure to ticks and also the strategic use of spot-ons to control ticks.

## Diagnostics

The most useful test your vet can perform is a lung wash or broncho alveolar lavage (BAL). This involves passing a tube down into the lungs via the nasal passage and aspirating a sample of saline from deep in the lungs. If lungworm is present, they can often be seen in the aspirated sample. The samples can also be spun down and sent to the lab for PCR testing. This is quite cost effective as samples can be pooled and tested together. The PCR test is also very sensitive as it is the DNA of the pathogen that is being tested for. The presence of viruses or bacteria in the sample offers concrete evidence that they are contributing to the problem.

Bulk milk screening or blood testing will identify if IBR is present. In addition, as mentioned previously, the bulk milk is extremely useful for monitoring the success of IBR vaccination. If Tick borne fever is suspected, strategic blood sampling of cows that had recent high temperatures offers the best chance of confirming infection. Unfortunately, if we draw a blank with a lung wash or other tests, which can happen, we are left with response to treatment as a means of distinguishing what agents might be implicated.

## The bigger picture

The herds I see that experience complicated respiratory problems are often top performing herds with excellent production. If a herd peaks in May at 30 Litres, the average cow requires approx. 20 UFL for production and maintenance. The mature and higher producing cows will require more. The average cow will, for example require 17kg DM of grass and 3 kg of concentrates. Cows that are experiencing even mild negative energy balance will have weaker immunity. Also factors like long walks, long standing times for milking, inadequate water supply, lameness will all cause stress and impaired immunity. Dosing and vaccination have an important role to play, but always be looking at ways to maximise immunity and reduce stress.

## HERD HEALTH TASKS FOR AUTUMN

### Salmonella vaccination

August or early September is the best time to complete Salmonella vaccination in spring calving dairy herds. The stress associated with drying off cows is often the trigger that can cause carrier cows in the herd to start shedding the bacteria.

Vaccinating in August or early September will ensure pregnant animals will have maximum immunity during this risk period. Remember animals receiving the vaccine for the first time require a primary course of two shots three weeks apart.

Pic attached







## Parasite control

The future of parasite control is about working more on prevention and doing more monitoring. Monitoring involves assessing performance (milk production or weight gain), clinical signs (coughing or loose dungs), the weather (as mentioned) and the use of diagnostic tests (bulk milk in cows and faecal egg counts in young stock). If calves are coughing with lung worm, the whole group must be treated. If there is no coughing and you are wondering if you should dose for stomach worms, a pooled faecal egg count is very useful in making this decision. Avoid overuse of products from the same family and avoid underdosing.

## SCC and mastitis

August is a month when SCC can start to creep up. This is due to spread occurring from infected cows during the year and also milk volume decreasing. I am also hearing of cases of increased incidence of clinical mastitis, especially in herds with a low cell count. Strep uberis is the most common bacteria isolated. Strep uberis can be contagious and spread at milking but is more recognised as an environmental pathogen.

- Always keep an eye on the cows' environment – roadways, gaps, footbaths etc for areas where cows could be picking up environmental infection and correct if possible.
- Consider pre-spraying and drying if environmental mastitis is a problem.
- If SCC is creeping up, the main challenge is to minimise the spread of infection at milking from infected cows to clean cows.
- Ensure a good job is being done post spraying – 15mls per cow per milking (3 Litres per day for a 100-cow herd). If more than 10% of cows have rough teats, it is an indication that the job is not being done correctly or the product lacks good emollients.
- Keep an eye on teat ends. If more than 20% of cows have rough teat ends, it is a sign that all is not right with the parlour. Book a service if you suspect a problem.
- Ensure liners are changed every 2000 milking or every 6 months.
- Flies can spread mastitis at this time of year – Use a pour on or ensure fly repellent is in the teat spray or both.
- Milk recording will find the offending cows and the coloured reports will class them as recent or persistently infected. It is critical to act on these results.
- Use the California mastitis test to find the high SCC quarters within the high SCC cows.
- Treat cows that are worth treating and that you have a reasonable chance of curing. Talk to your vet regarding treatment options.
- Consider drying a quarter in cows with chronic persistent infections that have a poor chance of cure.
- Ensure you are minimising the spread from all high SCC cows by milking them last or dipping the clusters in peracetic acid solution after milking.
- Start collecting and freezing samples from the offending quarters of high SCC cows. A number of samples can be then sent to the lab together for culture and sensitivity. The results will be extremely valuable for you and your vet when deciding on the choice of dry cow tube this Autumn.

## Metabolic diseases in cows

Milk fever or subclinical milk fever is very common and can be the underlying cause of a host of other issues like retained afterbirths, displaced stomach, ketosis and mastitis. High levels of potassium in dry cow silage is the main culprit for this condition. Analysing your dry cow silage for quality and minerals is essential and should be done routinely. Knowing the quality and mineral status of your dry cow silage will allow management decisions to be taken around mineral and concentrate supplementation to ensure cows calve down in the correct body condition, with high quality colostrum and good calcium status.