



XLVets wish all our clients a very happy christmas and prosperous New Year



Stop Press

As a group we are pushing forward in many areas - we have just undertaken a national survey trial for Merial on the presence of ostertagia in the national dairy herd and its economic impact.

We are soon to be establishing a website shop for the cost effective sale of quality medicines and accessories for farmers which have our professional commitment as being effective products.

We have secured highly competitive national deals on enzootic abortion vaccine in sheep, Bovipast pneumonia vaccine for calves and are working on other deals for the spring for the financial advantage of XLVets clients.

We are establishing within the group a forum for the sharing of our expertise (17 DBR's within the group), farmer training packages, best practice protocols and the commitment to raising our clients productivity and farm health status.

We are working on launching new products and services in 2006 from the manufacturers & researchers through XLVets and hence our clients should have the advantage of our cutting edge delivery of products and service.

As a group, we are here to help you in any way possible to improve your productivity. Herd health planning and consultancy meetings we see as key to monitoring farm performance and XLVet practices given the opportunity can help you maximise your farming enterprise productivity.

Liver fluke in cattle

- time to take a fresh look at your herd performance

Fluke infection has been recognized of generations but evolving problems in cattle demand we look afresh at how liver fluke might be undermining herd performance.

Over the past years we have seen an alarming increased incidence of liver fluke. This has coincided with a greater geographic distribution beyond the traditional at risk, high rainfall areas.

The main signs are of a reduced growth rate, a gradual depression of milk yield and stock that the farmer comments are generally not thriving.

Farmers often overlook fluke in cattle because the signs are very subtle and clinical disease is rare. Just because you don't see the signs or the farm has never traditionally had fluke doesn't mean that the cows and young stock wouldn't benefit from a fluke control strategy.

Sheep are particularly susceptible to fluke and infection can cause serious illness and death

Low grade infection of just 100 fluke found to result in 400lit/cow/lactation lost yield. For 100 cow herd at 18ppl this equates to £7,200 p.a.

Fluke also has a detrimental effect on butterfat. Research shows untreated animals can experience 10% less milk solids.

The heavily pregnant dry cow in poor body condition can indicate a fluke associated nutritional challenge in late pregnancy. Calf birth rates on fluke infected cows can be 10% lower. Young-stock experiences poorer growth rates giving reduced efficiency for the rearing of replacement heifer.

Fluke infection can reduce feed conversion and depress appetite (Dry Matter Intake reduced as much as 11%). This nutritional stress depresses fertility and compromises the cow's immune status. In essence fluke infection will reduce lifetime performance.

Fluke infection can precipitate other infectious disease such as the Clostridial infection: Black disease or compound outbreaks of Salmonella.

Many farmers see the need to treat for fluke infection in sheep where symptoms can be more graphic, yet fail to recognize the production loss in cattle.

'Liver Fluke' (*Fasciola hepatica*) is a flat leaf-like (3.5cm) parasite found in the liver of grazing animals. Eggs from adult female fluke pass in the dung to contaminate pasture. When conditions are suitable, damp and warm (above 10%), the eggs evolve and hatch to form mobile larvae that seek out mud snails to complete their life cycle. The presence of the amphibious mud snails determines the distribution of fluke.

The highest risk grazing is the wet areas, and rutted pools of water. Anywhere there are pools of water.

The larvae multiply in the snails and emerge to attach to the grass as cysts. The grazing animal ingests the cyst where it breaks out as an immature fluke to make its way to the liver. The fluke tunnel through the liver which if conditions favor the mass hatch and infection can cause severe and permanent damage.

The adult fluke live in the bile ducts of the liver where they feed on blood. This can amount to half ml per adult fluke per day explaining the anemia exhibited by infected animals.

Fluke diagnosis is not straight forward and needs careful interpretation so speak to your vet. Fluke egg counts from faecal samples indicate infection but egg production is sporadic. Blood sampling a random group (often young homebred stock are a good indicator) can reveal the foot-print of fluke infection. Post mortem / slaughterhouse feedback provides a direct report of fluke level in condemned livers. Many more abattoirs are doing this now.

Treatment is very effective but needs to be targeted to the fluke season and recognize the variable efficacy of product for the different stages of fluke (early immature, immature and adult). You must bear in mind the milk withhold which means often treatment is targeted in the dry period.

Treatments come as drenches and injections. And you can get combined wormer and fluke.

Recognizing fluke and a strategic approach to treatment should be a component of your herd health plan reviews. A little investment in health will go a long way to alleviating the production loss that is the hidden cost of fluke infection.



Calf rearing issues



The first six months of a calf's life are critical in determining their later performance. Borrowing a principle from the pig sector is a good idea when considering the economics of calf rearing. Maximising daily gain and feed conversion ratio helps justify outlay on top-of-the-range feedstuffs and good preventative healthcare. It also allows the throughput of animals to be increased as they are on the unit for a shorter period of time, thus increasing the returns possible for the enterprise.

However, all too often, calves suffer from ill health within their first few weeks of life, always checking their growth and sometimes ending in death. One of the early problems is scours, and the most appropriate management system needs to be agreed between vet and farmer. Whether this is vaccinating dams to confer colostral-protection against, for example, rotavirus and coronavirus or preventatively treating the calves themselves, a preventative approach is recommended by most vets.

One of the more poorly understood causes of scours is *Cryptosporidium parvum* which accounts for more than 25% of scour in calves aged five - 15 days of age. While rotavirus and coronavirus typically affect the calf during the first 48 hours of life, *Crypto.* tends to be a problem from five to seven days of age. Signs of cryptosporidiosis

- Profuse watery diarrhoea over several days that is unresponsive to usual therapies;
- Depression, lethargy;
- Reduced appetite as a result of nausea;
- Raised temperature and dehydration - sometimes fluid therapy may be necessary;
- Abdominal pain;
- Mortality - usually five to 10% but can be as high as 30%.

NB accurate diagnosis is only possible through the identification of oocysts from faecal samples.

Halofuginone (Halocur - Intervet UK Ltd) is the only product licensed for the treatment of *Cryptosporidium* infection in cattle and acts upon the sporozoite and merozoite stages of the parasite's life-cycle. In practical terms, Halocur reduces the

replication of *Cryptosporidium* during the period of administration, which also reduced the consequent scale of the parasitic burden and shedding of oocysts into the environment. This gives the calf the chance to become immunologically competent with regard to *Cryptosporidium* whilst reducing the level of challenge to the other calves.

Therefore, Halocur not only reduces the severity of cryptosporidial diarrhoea, it also suppresses the output of oocysts, so preventing more animals from becoming infected. Calves treated with Halocur (administered daily for seven days) have been shown to require less antibiotics, anti-inflammatories and especially rehydration therapy. In the same study, the untreated calves' levels of dehydration remained more pronounced despite the rehydration therapy and their general condition and appetite were similarly poorer.

Salmonellosis can be a significant problem particularly in bought-in calves. It is also a changing one. Previously, the common *Salmonella typhimurium* was the main causal organism, but reports now indicate that *Salmonella dublin* is increasingly important. Worryingly, *S. dublin* can affect quite young calves - from two to eight weeks of age. Often infection occurs at calving as an infected cow sheds more bacteria at times of stress. Cows can receive a vaccination of Bovivac S (Intervet UK) in the last month pre-calving to minimise shedding, and then the calf can be vaccinated from three weeks of age.

In addition to scours, pneumonia is probably the main enemy of the calf rearer, and something that is again capable of causing death. More commonly, however, pneumonia slows down growth and requires the use of aggressive antibiotic therapy.

Pneumonia is caused by a range of viruses and bacteria, with *Pasteurella* probably the most important bacteria involved. The interactions between the different viruses and bacteria make respiratory disease very hard to control on-farm and, as such, a preventative approach is being recommended by an increasing number of vets. Recently published work (based on 12 farms studied) put the cost of pneumonia at a minimum of £43/calf affected through mortality, vet fees, medicines, labour and poor growth rates.

It is often unclear which stress factor (such as housing or overcrowding) acts as a trigger to infection, and then which agent then first infects the calf (though in cases of severe infection, it is normally *P. (Mannheimia) haemolytica* that kills the calf). Add to this the fact that viruses do not respond.

It is well documented that calves which have suffered pneumonia will have had their lifetime growth rates and productivity checked and will probably have had to undergo aggressive antibiotic therapy. This means increased medical costs and the calf never achieving its full potential. The interactions between the different viruses and bacteria make pneumonia very hard to control on-farm and, as such, a preventative approach is generally recommended.

Bovipast RSP (Intervet UK) uniquely gives protection against both viral and bacterial causes of pneumonia (PI3, RSV and *P. (Mannheimia) haemolytica*), thereby minimising the risk of infection, so ensuring good health, and good growth rates. Another viral vaccine available is Rispoval 4 and the choice for your farm is determined upon the most likely viral threats and local veterinary knowledge. XLVets have managed to secure an excellent deal on Bovipast to help you in your preventative program of vaccination. However, it is important to remember that no vaccine makes up for poor management - attention to detail, good ventilation and high management standards remain important and these are important discussions to be had with your XLvets practice during herd health planning for the year.

Paying close attention to calf health and aiming towards the MLC-recommended daily liveweight gain figures of 0.45kg/day in the first six weeks of life and then aiming for 0.95kg/day in the following six weeks should ensure quality stock is produced. These performance levels can only be achieved if a proactive team (you and your vet) approach to preventative healthcare is adopted. XLVets with our wealth of experience, as a group of specialized farm vets are passionate about preventative healthcare programs to maximize your economic profitability, so please involve us in a discussion to plan your calf rearing healthcare needs for the year.

Footrot in sheep - the whole flock approach to management

Footrot is the most common cause of lameness in sheep. It reduces body condition leading to poor ram performance, poor condition of ewes leading to small lambs, poor colostrums, higher lamb mortality and higher cull rates. The economic losses may be as much as £6.50 per ewe each year.

There are 3 common conditions causing foot lameness in sheep and it is essential for your vet to make an accurate diagnosis for an effective control programme to be implemented:

Scald - between the hoof problem especially of young lambs 1-3 months old

CODD - Contagious Ovine Digital dermatitis is a disease of the coronary band and is increasing in the UK. Traditional footbaths and vaccination are ineffective at control and antibiotic treatment variable so it is essential to work with your vet to keep this out of your flock.

Footrot - bacterial disease causing under-running infection of the hoof horn and associated smell. Whole flock control program will control footrot and incorporates vaccination with 'Footvax', antibiotics, footbathing and culling.

Footrot is highly infectious and transmitted sheep to sheep especially when confined in small areas which are warm and wet (most common spring and autumn). The bacteria only survive for 10 days in the environment so pasture is clean after resting for this 2 week period.

Footrot Action Plan

Where only 5-10% sheep affected - ideally isolate and cull these out of the flock.

Greater than 10% of flock affected - treat with effective antibiotics and cull if poor response. Vaccination can be used as treatment or prevention - vaccinate the whole flock if more than 50% affected. Footvax gives maximum immunity 14 to 21 days after vaccination and remains effective for 4-5 months and hence vaccination should be timed to coincide with the period of footrot challenge but avoid within 4 weeks of tupping or lambing. Ideally a course of 2 injections in the first year with ewes given a booster a month prior to tupping.

Once vaccinated, these are clean sheep and should be moved to clean pasture and kept in isolation

until the following spring. This segregation is essential to break the cycle of bacterial spread from infected to clean sheep within the flock. Ensure flock security by

- Examining, vaccinating and foot bathing new sheep immediately upon arrival
- Segregating and treating any infected sheep
- Quarantining new sheep for 3-4 weeks
- Inspecting again before mixing with flock

Foot baths using a walk through 3% formalin or a 20 minute stand in 10% zinc sulphate with added wetting agent are very effective at scald control in lambs but although they are an aid to footrot control it is unlikely to eradicate footrot on its own.

This best practice approach to flock management has been highly successful on many farms. Ask your XLVet practice about footrot eradication and control in your flock. Your economic losses may be more significant than you think - discuss this at a flock health planning meeting.