

Hypophosphataemia

As our usual Phosphorus supplement "Foston" is currently unavailable, now is a good time to review phosphorus deficiency...

Phosphorus deficiency can be seen in 2 forms, chronic or acute.

The chronic form is most commonly seen in cattle fed a phosphorus-deficient diet over several months. Young animals grow slowly, develop rickets, and tend to have a rough hair coat, whereas adult animals in early stages may become lethargic, anorexic, and lose weight.



Acute phosphorus losses are a well-recognized problem in high-yielding dairy cows at the onset of lactation. The sudden increased demand for milk production and the decreased feed intake around calving are believed to be the major contributors. Although this is widely believed to be associated with periparturient recumbency and the downer cow syndrome, the evidence behind this is actually fairly weak.



It is currently not well understood whether the above-mentioned clinical signs and conditions are caused by low levels of phosphorus in the blood or by overall depletion of phosphorus in the body. It is also worth noting that although many pastures in our area have traditionally been thought of as being low in phosphorus, we have never seen a case of genuine chronic disease here.

The main preventive measure is to ensure dairy cows in particular have a nutritionally balanced diet. For those of you who have a particular need of a supplement, we can import an injectable form which also has added vitamin B12, called Vigophos. Cows require roughly 30ml a day for 3 days, which makes a 100ml bottle a convenient size per cow. As this is a special import, delivery will take a few days.

Abortion in ewes

Infectious causes of abortion are most common after day 100 of pregnancy. While sporadic losses are variably attributed to handling procedures or movement, an abortion rate over two per cent is suggestive of an infectious cause and veterinary investigation is essential at an early stage. Enzootic abortion of ewes and *Toxoplasma* cause over 70 per cent of abortion outbreaks in the UK. The cost of abortion is variably quoted as £30 to £100 per aborted ewe.

Chlamydial abortion, *Chlamydophila abortus*, enzootic abortion of ewes (EAE)

Pregnant women are at serious risk from this infection. Despite the availability of a highly effective vaccine, EAE is still the main cause of abortion in the UK. Disease is transmitted by ingestion following exposure of susceptible sheep to high levels of infected uterine discharges and aborted material. Infection does not result in abortion in that pregnancy unless the ewe is more than six weeks from her due lambing date, rather infection remains latent in the sheep until the subsequent pregnancy then causes abortion.



Infection typically results in the abortion/birth of fresh dead and/or weak lambs during the last three weeks of pregnancy. The ewe is not sick and may only be identified by a discharge staining the wool around the tail, and a drawn-up abdomen. Live lambs rarely survive more than a few hours in spite of supportive care. Whole flock treatment may reduce the number of abortions, but such treatment cannot reverse placental damage with the result that lambs are carried closer to term but remain weak at birth with consequent high mortality. From a practical point of view, while such antibiotic treatment may not save the lambs of an infected sheep, it allows healthy lambs to be fostered onto ewes which abort much closer to term and consequently have reasonable udder development and sufficient milk to nurse a single lamb.

In common with all infectious causes of abortion, aborted ewes must be isolated and aborted material and infected bedding removed and destroyed. Ewes that give birth to dead/weak full-term lambs should also be isolated. Lambs fostered on to aborted ewes should not be retained for future breeding.

Freedom from Chlamydia infection is best achieved by maintaining a closed clean flock with strict biosecurity measures. Various accreditation schemes are operating which offer breeding female replacements from flocks monitored free of infection. Vaccination offers an excellent means of control for farms buying breeding replacements from non-accredited sources, and in those flocks with an endemic problem. Vaccination of sheep already infected with will not prevent all abortions but can reduce the incidence.

Toxoplasmosis



Infection of susceptible women during pregnancy can result in infection of the baby which may cause serious eye and brain damage. Toxoplasmosis results from infection of susceptible sheep with the parasite *Toxoplasma gondii*. The parasite must spend some of its life cycle in cats. Older cats are usually immune, but young kittens can shed large numbers of the parasite in their faeces. Infection during early pregnancy may be manifest as an increased number of returns to service after an extended interval, or an increased barren rate. Often the highest number of barren sheep is in the youngest age group. Toxoplasma infection during mid pregnancy results in abortion or production of weakly live lambs near term often with a small mummified fetus.

Diagnosis of toxoplasmosis is usually based on identification of changes in the placenta in combination with the detection of high levels of antibodies in ewe blood. Blood sampling of the ewe alone indicates exposure to the parasite, not that the current abortion is specifically due to toxoplasmosis.

All sheep feed should be stored in vermin-proof facilities to prevent contamination by cats and other vermin. Vaccination provides excellent immunity to natural infection and should be administered at least three weeks before the breeding season. Farm cats should also be neutered.

The seasonal Toxovac window is now open. Remember that this vaccine is made to order and must be given at least 3 weeks before tugging