Canolfan Milfeddygaeth Cymru
Wales Veterinary Science Centre

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NEWSLETTER CYLCHLYTHYR

Upcoming CPD courses:

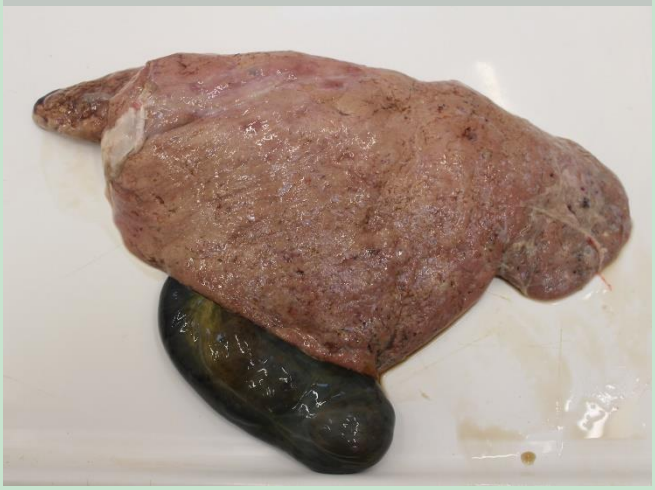
Basic Sheep Modular Course for Vets (Module 4) – 30th April 2025 @ WVSC. Lamb rearing to include growing lamb health and parasite control

BVD Cymru Conference – 4th June 2025 @ Medrus Conference Centre, Aberystwyth University

Acute and subacute liver fluke cases in adult sheep have been higher this winter than in previous years. A mild, wet summer and autumn in 2024 has provided a good snail habitat and a prolonged window for infection.

One submission from a small flock had a short history of recumbency and diarrhoea. The adult ewe was in good bodily condition, had an increased volume of brown peritoneal fluid and had pale mucous membranes. The liver was pale with fibrinohaemorrhagic deposits in the hepatic capsule and parenchyma (figure 1). Adult and immature flukes were found in the bile ducts and gall bladder (figure 2). Interestingly this case also had *Haemonchus contortus* in the abomasum.

Figure 1. diseased liver in acute fluke case



The causative organism of liver fluke, *Fasciola hepatica,* is hermaphroditic so only a single fluke is required to establish an infection. An adult can produce up to 20,000 eggs per day. Adult flukes have an impressive lifespan and have been known to survive to 11 years old, longer than your average ewe!

Infective metacercariae are ingested from the pasture, they penetrate the duodenal wall and cross the peritoneal cavity before arrival at the liver. Some can go astray; intrauterine infections have been recorded and lesions are occasionally seen in bovine lungs. Varying degrees of peritonitis can occasionally be seen on postmortem due to the passage of immature fluke through the peritoneal space and the damage to the liver capsule.

Gross pathology seen in the liver in acute cases is essentially down to trauma caused to the parenchyma by fluke migration. Coagulative necrosis, presumably caused by toxins excreted by the fluke, contributes to the tissue damage. In acute cases death is due to acute hepatitis or in subacute cases a period of inappetence, lethargy, fever and abdominal discomfort precedes death.

Figure 2. immature and mature fluke

SHEEP ABORTION REMINDER:

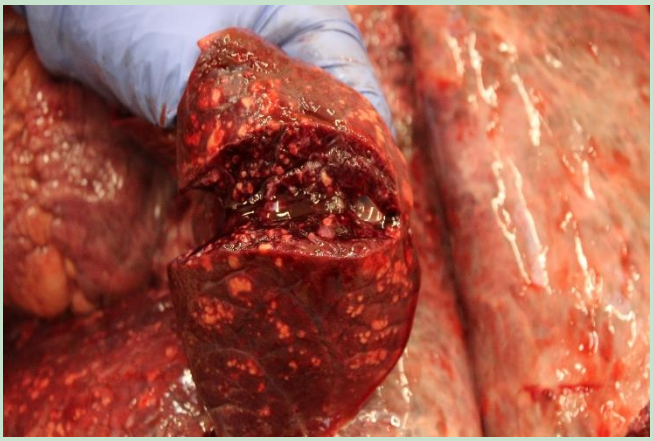
Both EAE and Toxoplasmosis are diagnosed by testing placenta, so it is more important than ever to ensure placenta is submitted with aborted lambs

Mycoplasma bovis was responsible for death in five homebred suckler calves at approximately six months of age. The calves had been vaccinated against other respiratory pathogens and treatment for pneumonia had been attempted.

Postmortem findings included a dark red and thickened tracheal lining, fibrous adhesions between the lungs, diaphragm and chest wall. The lungs were severely consolidated with diffuse miliary abscesses and very little normal lung tissue (figure 3 and 4).

Figure 3. diffusely consolidated lungs

Figure 4. cut lung displaying miliary abscesses



Mycoplasma pneumonia is typically poorly responsive to antimicrobials and relapsing signs are often seen. Infection is usually by direct contact with respiratory secretions or inhalation of infected droplets. *M.bovis* is adept at evading the host immune system and antibiotic treatment due to its molecular structure.

Mycoplasma spp. are notoriously difficult to culture, histopathology can be suggestive but PCR testing gives a definitive diagnosis. As with all cattle pneumonias, a mixed infection is common. Mastitis, arthritis and otitis media are other presentations that may be seen.

Cattle abortions can be unrewarding and frustrating to investigate but recent submissions have resulted in a variety of diagnoses.

One foetus was submitted as the fourth abortion in a dairy herd. The dam aborted her calf at seven months into her pregnancy, the herd was vaccinated for BVD, Leptospirosis and IBR. The losses were in older cows who remained clinically well. *Trueperella pyogenes* was cultured from the foetus. This is a sporadic cause of abortion in cattle. The bacteria are commonly found on the skin and mucous membranes of healthy animals. The pathogenesis is uncertain but believed to be due to the bacteria gaining access to the blood stream via the mucosal surfaces and setting up a transient bacteraemia. This results in placentitis and abortion in pregnant dams.

In another submission several cows in a large dairy herd aborted their calves over a few months. The herd was vaccinated for BVD and Leptospirosis. *Salmonella dublin* was diagnosed on culture.

S. dublin is the most common cause of cattle abortions in the UK. Vaccination is the best form of prevention. The dam will usually make a full recovery but may become a chronic carrier and shed. In carrier animals, abortions are often brought on by a stressful event such as transport or dietary change.

Infection within a month of birth can result in a live carrier calf being born. A range of clinical manifestations can be seen in infected herds, including abortion, pneumonia and enteritis.

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Please check the eligibility for **free carcase collection** via this website:

http://apha.defra.gov.uk/postcode/pme.asp

The suitability of submissions for a postmortem exam. must always be discussed with the WVSC duty vet.