



## VLA MONTHLY SCANNING SURVEILLANCE REPORT FEBRUARY 2009

### HIGHLIGHTS

#### **Bovine abortion caused by Border Disease virus**

*Vets and farmers need to appreciate the spectrum of pestiviruses which affect different livestock species. The current BVD vaccines available for cattle do not claim efficacy against border disease virus. This needs to be taken into consideration when formulating herd control and eradication plans*

#### **Severe form of Papular Stomatitis in a Limousin bull**

*Parapox virus causes Pseudocowpox and Papular Stomatitis in cattle. The latter is usually a mild disease in youngstock, this case is unusual in its severity and age range. Investigations into possible impaired immunity in the affected animal are continuing*

#### **Calf pneumonia prevalent, causes included RSV, Mannheimia haemolytica, Pasteurella multocida and Histophilus somni**

*Consistent with the expected seasonal trend in bovine respiratory disease. Primary bacterial causes were particularly prevalent although the overall spectrum of causative agents was unremarkable.*

#### **Fasciolosis continuing to cause losses in cattle and sheep, evidence of continuing acute infection in sheep**

*There is good evidence that grazing animals are still being exposed to infective metacercariae on pasture. A spectrum of lesions ranging from acute and subacute to chronic are being detected in affected animals, particularly sheep.*

#### **Failure to vaccinate ewes associated with outbreaks of Clostridial disease**

*Clostridial vaccination should be a mainstay of any flock health plan. Flock owners who choose not to vaccinate, run a significant risk of experiencing losses since many of the predisposing factors for Clostridial disease are hard to anticipate or prevent.*

#### **Pregnancy toxæmia in ewes**

*Associated with inadequate nutrition in late pregnancy, cases of this disease are unremarkable at this time of year.*

#### **Further cases of riboflavin deficiency in chickens**

*Easily prevented by correct nutritional management*

# CATTLE

## ***Reproductive diseases***

### **Border disease**

Preston isolated Border disease virus from the carcass of 150 day foetus from an adult dairy cow. The herd vaccinated against both BVD and Leptospirosis. The cow had been housed for a number of months and had not been in contact with sheep at any point. The vaccine manufacturers do not claim protection against border disease and further investigation has centred on the possibility of a border disease PI animal being present in the herd.

### **BVD**

The benefit of using bulk milk samples to screen for viral RNA was highlighted in one dairy herd with a history of poor fertility. Two samples submitted, from the high and low yield groups identified viral RNA in both samples, confirming circulating infection.

### **Bacillus licheniformis**

A British White suckler cow aborted at approximately 6.5 months gestation; she was the third cow to abort in this herd of 20 since Christmas. Examination of the foetus at Luddington showed marbling of the liver and a fibrinous pericarditis; *Bacillus licheniformis* was isolated in pure growth from foetal stomach contents and spleen.

## ***Alimentary Tract Diseases***

### **BVD**

The consequences of the introduction of BVD into a naïve herd were highlighted by Carmarthen following the identification of BVD type 1 virus in tissues from the carcass of a 6 month old heifer calf and blood samples from four heifer calves of the same age. Three calves born around the same time had already died. The calves, which were homebred, were reported to be unthrifty and had respiratory disease. The herd was a large dairy herd that had previously always had a negative BVD antibody bulk milk result. Cattle had been transferred into this herd from a BVD antibody positive herd last year and the bulk milk BVD antibody result was first noted to be positive in October 2008 and vaccination subsequently implemented.

### **Fasciolosis**

Fasciolosis continued to be frequently reported. Preston identified 12 cases the majority of which presented with either diarrhoea or loss of condition. These included an adult bull from a suckler herd and a 16 month old beef finishing animal. Two cases also had acid fast organisms present consistent with a diagnosis of Johnes disease.

Starcross also diagnosed Fasciolosis on 14 farms. In two of these herds, within herd prevalence was also demonstrated by bulk milk serology indicating a seroprevalence >25%.

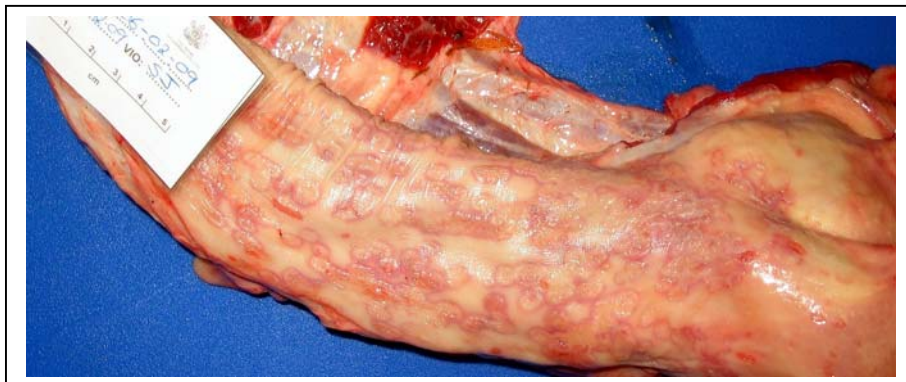
### **Abomasal bloat**

Preston necropsied a six day old calf after it died with acute abdominal distension. At necropsy, many petechial haemorrhages were evident on the serosa of the rumen, reticulum, omasum and abomasums. The abomasum was grossly distended with gas and around 3 litres of noxious black liquid. The mucosa was a diffuse red colour with widespread emphysema. Histology confirmed the presence of Sarcina like bacteria, which have been previously associated with this condition, in the abomasum lumen. In addition *Clostridium perfringens* was isolated on culture of the abomasal fluid.

### **Papular Stomatitis**

Two 30-month-old Limousin bulls had been dramatically losing condition over three months following the breeding season, despite being housed with an ad lib food supply. They also developed diarrhoea. All remaining cows and bulls seemed unaffected. One of the bulls deteriorated to recumbency, was euthanased and submitted to RVC for post mortem examination which revealed numerous circular lesions in the mucosa of the upper oesophagus and numerous deep erosions with diphtheritic membranes in the caudal oesophagus (Fig.1). Parapox virus was identified by electron microscopy and together with histological findings indicated a diagnosis of Bovine papular Stomatitis. *Fusobacterium necrophorum necrophorum* was also isolated and considered to be a secondary infection contributing to the necrotising ulcerative oesophagitis. The widespread nature and severity of the oesophageal lesions were unusual for bovine papular stomatitis compared to reports in the literature. An underlying immunosuppressive disease is suspected but has not been identified to date. The investigation is continuing.

**Figure 1**  
**Oesophageal lesions caused by parapox virus in a 30 month old Limousin bull**



## ***Respiratory Diseases***

### **Respiratory Syncytial Virus (RSV)**

Penrith diagnosed two outbreaks of RSV pneumonia affecting calves aged 4-5 months. The first case involved a group of seven Limousin-cross stirks, two of which had died. The second case was a group of eight calves, two of which

had died. Immunohistochemistry was required to confirm RSV infection in the second case.

In another case RSV infection resulted in 100% morbidity in a group of 20, two-month-old dairy calves. At post-mortem BVD virus was also detected by PCR in a pneumonic calf and was likely to have been a predisposing factor.. *Mannheimia haemolytica* was also isolated from the consolidated lung.

### **Mannheimia haemolytica**

*Mannheimia haemolytica* was isolated from the lung of a four week old Holstein Friesian calf examined at VLA Carmarthen. Four out of ten calves had died and four others were reported to be showing poor growth. Some diarrhoea had been reported in the group, but not in the calf examined. Post-mortem examination revealed 50% of the left lung lobe to be consolidated, with a cranioventral distribution and there were adhesions between the lung, the heart and sternum. Histological examination identified a severe bronchointerstitial pneumonia with no evidence of viral or mycoplasmal agents.

### **Histophilus somni**

Pneumonia caused by *Histophilus somni* was diagnosed in a one-month old Simmental cross calf, one of four animals to have had died in an 80 cow suckler herd. At necropsy, there was 75% consolidation of all lung lobes with a cranioventral distribution. *H. somni* was cultured from consolidated lung tissue.

### **Pasteurella multocida**

Bronchoalveolar lavage samples from three animals in a group of sixty two-month-old fattening cattle with chronic respiratory signs were submitted to Bury. No respiratory viruses were detected but *Pasteurella multocida* was cultured from two of the samples.

Preston also investigated a case where severe, chronic fibrinohaemorrhagic and suppurative bronchopneumonia was confirmed in a five month old dairy heifer. This animal was the only clinical case to have died in an outbreak of respiratory disease affecting 50% of a group of around 30 similarly aged animals. At necropsy, extensive and widespread adhesions were noted between all lung lobes, which were firm to the touch. Incision into the lung lobes revealed a diffuse red/purple colouration, with widening of the interlobular septae by a yellow gelatinous fluid. *Pasteurella multocida* was isolated on culture and histology did not identify any evidence of a primary pneumotropic viral infection.

### **Mannheimia haemolytica**

Post-mortem examination of a 5 week old suckler calf at Shrewsbury revealed cranioventral lung consolidation with miliary purulent foci. It was the only animal affected in a group of 3 cows and 3 calves. *Mannheimia haemolytica* and *Arcanobacterium pyogenes* were isolated from the lung. Subsequent histopathological examination confirmed sub-acute to chronic colitis associated with damage caused by coccidiosis which may have predisposed to the pneumonia.

## ***Metabolic Diseases***

### **Fatty Liver Syndrome**

Samples received at Penrith from a downer cow three-weeks post-calving was found to have a BHB level of 3.5mmol/l (Ref: 0-1.2) and a NEFA of 1284 µmol/l (Ref: 0-600) consistent with ketosis and fatty liver syndrome.

Langford also diagnosed Fatty Liver syndrome with or without accompanying ketosis in three incidents involving five cows. Accompanying history included poor fertility, increased incidence of Left Displaced Abomasum, ketosis and poor condition. On one farm in which all six cows screened had NEFA levels in excess of 1,300 yields were described as poor.

### **Rumen Acidosis**

Bury investigated the deaths of three nine-month-old beef cattle in good body condition which were found dead one morning at pasture with the rest of the group of 180 looking healthy. Post-mortem examination was indicative of rumen acidosis and subsequent investigations revealed selective consumption of fodder beet in preference to poor quality forage was the principal cause.

## ***Systemic Diseases***

### **Thrombocytopaenia**

Sutton Bonnington diagnosed thrombocytopaenia, secondary to septicaemia/toxaemia, exacerbated by disseminated intravenous coagulation as the cause of death of a three-week-old suckler calf. The calf had been born strong but had developed pyrexia in its third week of life and was treated with antibiotics and non-steroidal anti-inflammatory drugs. A day later swelling and bleeding were observed at the injection site and haemorrhage detected in a joint tap of a swollen hock joint. At post-mortem there was subcutaneous haemorrhage at multiple sites and haemorrhage within the hock joint which tracked up the right hind leg between muscle fascial planes. In addition to a twist in the mesentery, distally the intestine contents were haemorrhagic from which *Clostridium sordellii* was later isolated. Multifocal haemorrhages were present beneath the epicardium and endocardium and in the right renal cortex. Haematology illustrated a hypochromic normochromic anaemia and histopathology confirmed a bone marrow insult with the presence of erythroid precursors but a complete absence of megakaryocytes. The thrombocytopaenia was thought to be caused by the toxaemia however the relation of this case to the reports of a bleeding syndrome in calves in Europe is being considered.

## **SMALL RUMINANTS**

### ***Reproductive diseases***

#### **Enzootic abortion**

Enzootic abortion was confirmed by Penrith in a flock of 60 ewes with seven abortions. They were unvaccinated. Enzootic abortion was also confirmed in another unvaccinated flock of 270 ewes with six abortions.

### **Yersinia pseudotuberculosis**

In another case *Yersinia pseudotuberculosis* was isolated from the foetal stomach contents of an abortion with a mild placentitis and multi-focal pinpoint foci in the liver of the foetus. Two of 300 ewes had aborted.

Winchester also reported a more unusual incident in which 8/54 ewes aborted. Despite the placental lesions having a superficial appearance typical of enzootic abortion no *Chlamydia* were demonstrated and a pure growth of *Yersinia pseudotuberculosis* was isolated from both placenta and foetal stomach content.

### **Campylobacter jejuni**

Winchester identified *Campylobacter jejuni* as the cause of abortion in a 250-ewe flock which had four abortions over 48 hours.

The same organism was found to be responsible for abortions in a second flock in which 12/800 abortions occurred, the organism being isolated from foetal stomach content of a number of lambs submitted.

## ***Alimentary Tract Diseases***

### **Fasciolosis**

Fasciolosis continued to be a common diagnosis during February. Of particular note was the continuing detection of acute infection in some cases. One such case was described by Carmarthen affecting a four-year old North Country Cheviot ewe that had been at grass for three weeks. Ewes had received flukicide treatment six weeks prior to the death of this animal when they had been housed for lambing.

Langford also diagnosed acute fasciolosis affecting four out of a group of 271 store lambs which exhibited malaise and became recumbent with three dying later.

Post-mortem examination of an 8-month-old lamb with a history of chronic wasting at Penrith resulted in a diagnosis of chronic fasciolosis. The group had been treated twice with triclabendazole in the previous five weeks, but hundreds of adult fluke were present within the liver and gall bladder. Penrith also reported that numerous faeces samples had been submitted for fluke egg examination, sometimes as a way of checking the effectiveness of previous treatments. Fluke eggs were however demonstrated on many occasions suggesting lack of efficacy or inadequate treatment.

### **Paramphistomum (Rumen fluke)**

Preston identified Rumen fluke (*Paramphistomum* spp.) in a Texel cross ewe that had died of chronic fasciolosis and trichostrongylosis. *Paramphistomum* spp. have been reported recently in cattle, but not in sheep. Small numbers of adult fluke in the rumen are not significant, but larval development occurs in the proximal small intestine and heavy infestations can result in enteritis and ill-thrift.

### **Parasitic gastroenteritis (PGE)**

A flock with 30/68 ewes in poor condition submitted one of five dead ewes to Penrith for post-mortem examination. Large numbers of adult fluke were evident as well as extensive liver damage. Large numbers of lungworm were evident in the airways with an associated patchy pneumonia. Worm egg count revealed 10,000 trichostrongyle eggs per gram indicating PGE in

addition to chronic fasciolosis and lungworm infection. The ewes had been treated with triclabendazole and closantel, but it was suspected that not all ewes had been treated.

Bury investigated a group of 80 in-lamb ewes from which two had died and six were affected with wasting with 30% of the group scouring. The flock had been wormed in November and the submitted ewe had a total worm count in the abomasum of 1,200 *Ostertagia* species and 13,200 *Trichostrongyle* species. Parasitic gastroenteritis was the cause of scour and ill thrift.

### **Lamb Dysentery**

Enterotoxaemia due to *Clostridium perfringens* type B (lamb dysentery) caused the death of an approximately 1-week old Texel-cross hill lamb which was submitted to Aberystwyth. It was the only lamb affected out of one hundred, from a flock of one hundred and seventy ewes. No clostridial vaccinations were used in the flock.

In another incident three out of 24 housed Texel cross lambs died at about 3 weeks of age. The lamb submitted was found in lateral recumbency with the head thrown back. One of the previously affected lambs had shown similar signs whilst the other was found dead. The ewes were unvaccinated against clostridial disease and vaccination of ewes before lambing in future years was advised.

### **Watery mouth**

Sutton Bonnington diagnosed watery mouth in a group of five 0-3 day-old lambs. Lambing had commenced approximately ten days ago with the ewe lambs (11 in number) lambing first. Six lambs born to these ewe lambs had died in the first few days of life. The pathology observed in the carcasses was consistent with septicaemia and *E. coli* was isolated on culture, supporting a diagnosis of colisepticaemia. Advice was to improve and maintain cleanliness and hygiene in the lambing area, introduce some additional hygiene measures such as navel spraying, ensure adequate colostrum intake and consider the use of a prophylactic antibiotics at or shortly after birth.

## ***Musculoskeletal diseases***

### **Streptococcus dysgalactiae polyarthrits**

Two five-day-old lambs, one live and one dead, were presented for necropsy at Sutton Bonnington. They were from a flock of 400 of which 70 lambs were affected. The lambs were unable to stand and suckle. At necropsy, multiple joints in both lambs contained red to yellow opaque fluid and fibrin clots. Culture from multiple sites in both animals resulted in heavy growth of *Streptococcus dysgalactiae*. Advice was given about lambing pen hygiene and navel dipping.

### **Clostridial Myositis**

A two-year-old Friesland dairy sheep was submitted to Thirsk to investigate mortality following shortly after affected individuals developed a swollen limb. This was the second individual from a group of 120 to have died in this way. The submitted ewe had lambed within the past fortnight and was milking well. The whole of the left front leg and the upper left hind leg were markedly swollen. Marked subcutaneous oedema with multiple haemorrhages and ecchymoses were present in these areas. The muscle groups showed

marked dry, red/black discoloured poorly demarcated areas with emphysema. (Figure 2 ). *C. septicum* was isolated on anaerobic cultures. Severe acute to subacute necrotising myositis was confirmed on histology carried out on the affected muscles consistent with a diagnosis of clostridial myositis.

**Figure 2.**  
**Necrotising myositis in hind limb muscles of a Friesland ewe**



### **Metabolic Diseases**

Preston diagnosed several cases of ketosis in February. In one flock 6/20 Mules had shown typical clinical signs 3 weeks before lambing, and had subsequently died. Post mortem findings on one affected ewe indicated a degree of hepatic lipidosis. Aqueous humour levels of calcium and magnesium were within expected ranges, but a BHB level of 3.89mmol/l (reference range 0-1.2 mmol/l) confirming a diagnosis of ketosis

Starcross also investigated a case in which a ewe that had become recumbent and developed nervous signs within two weeks of lambing. Testing revealed a seriously elevated BHB level of 7.07 mmol/l confirming pregnancy toxemia. The history indicated that 20 ewes out of a group of 250 being fed silage and concentrates had shown similar signs of anorexia, increasing lethargy, recumbency and death and died despite treatment.

Shrewsbury received blood samples from five ewes from a group of 260 in which seven had been showing signs of neurological disease with general weakness. Analysis of a metabolic profile demonstrated normal values for calcium and magnesium while the beta-hydroxybutyrate values ranged from 2.225-5.86 mmol/l (normal range is <0.2 mmol/l). A diagnosis of pregnancy toxemia was made.

## ***Nervous Diseases***

Starcross examined the carcasses of two weaned six-month-old lambs from a group of 28 purchased a month earlier and recently having access to housing. They had all been treated for fluke and worms a week earlier. Three lambs had developed nervous signs comprising of aimless walking, head pressing, progressing to recumbency, blindness, opisthotonus and death. There had been no response to treatment with thiamine, antibiotics or anti-inflammatories. Post mortem histology detected an 'acute multifocal to coalescent cortical necrosing encephalopathy with minimal vacuolar leucoencephalopathy'. This post-weaning encephalopathy has been noted before and is usually associated with water deprivation/salt intoxication within 48 hours of housing. Four outbreaks were the subject of a letter to the Veterinary Record which provided some useful background information. ('Unusual encephalopathy in weaned lambs' (2005) Veterinary Record. SFE Scholes et al, 24-31 December, page 853).

## **PIGS**

### ***Alimentary Tract Diseases***

#### **Salmonellosis**

Bury reported a number of outbreaks of salmonellosis. In one case, diarrhoea affected approximately 200 nine-week-old pigs with 15 deaths occurring over a three day period. The pigs were in groups of 100 in outdoor tents on a 1000 sow outdoor grower-producer unit. Necropsy findings included watery light green scour and mild to moderate typhlocolitis with some multifocal diphtheresis and were similar in all three pigs submitted. *Salmonella* Typhimurium phage type 193 was isolated from the intestines.

In another incident, wasting, dehydration and deaths with some scour in seven-week-old pigs were reported on an indoor nursery-finisher unit. Approximately 20% of 820 pigs from one source were affected with 41 deaths over 10 days and a poor response to several antimicrobial treatments was described. Water pipes were noted to be frozen when the practitioner visited the previous week. Three pigs were submitted; the small intestines of two were segmentally dilated with fluid and there was diphtheresis of the terminal ileum in one pig. The large intestine showed multifocal to confluent diphtheresis in the caecum and proximal colon with accumulation of fibrinous material in the lumen, thickened large intestinal wall and watery light brown scour. *S. Typhimurium* U288 was isolated from the livers and intestines.

### ***Respiratory Diseases***

#### **Actinobacillus pleuropneumoniae**

Sudden onset lethargy, laboured breathing and mortality occurred in localised groups of pens in two houses of finisher pigs on a continuous unit. There was coughing elsewhere although remaining pigs were said to be bright. Around 35% of pigs in one shed and a few in another shed were affected and six late finishers had died. Two pigs in good body condition were submitted to Bury which exhibited extensive purple blotching on the skin and gross findings consistent with severe pleuropneumonia due to *Actinobacillus pleuropneumoniae* which was subsequently isolated.

### **Swine Influenza**

Widespread coughing in finishers with 20% morbidity and 10% mortality was investigated by submission of paired sera. In five of 12 pigs sampled there was seroconversion to swine influenza strain H1N2, confirming active swine influenza infection on the unit.

### **Other diseases**

#### **Streptococcus suis**

The death of a two week old piglet submitted to VLA Carmarthen was diagnosed as *Streptococcus suis* 1 infection. The owner had three Large White sows and two had recently farrowed. Clinical signs were lethargy, dyspnoea and death within 12 hours and 3 piglets from 1 litter of 11 had died. There were haemorrhages throughout the lungs of both pig and also fibrin tags over the abdominal viscera. *Streptococcus suis* 1 was isolated in septicaemic distribution from one of two piglets received. The sows recently moved from a building with an earth floor to a concrete floored building. They were not receiving any iron supplementation and it was thought that iron deficiency could have been a predisposing factor.

Three 2 to 3 week old piglets were submitted to Thirsk to investigate a problem of joint-ill developing at that age in pre-weaning piglets. Initially, single joints were affected with very little lameness. This did however, rapidly worsen with spreading to other joints and with severe lameness if left untreated. Post-mortem examination confirmed the presence of purulent joint-ill in two of the piglets and evidence of septicaemia, pneumonia and polyserositis in the third. Cultures revealed pure growths of *Streptococcus suis* type 16 in two of the piglets and *Haemophilus parasuis* (aetiological agent of Glässer's disease) in the third piglet.

#### **Erysipelas**

The carcasses of seven pigs, aged 15-19-weeks-old from a finishing unit were submitted to Sutton Bonnington for necropsy examination. There had been a gradual increase in lameness, especially affecting hind limbs, and an increase in carcase condemnation due to polyarthritis. In the older animals there was some respiratory distress and weight loss. At necropsy, three older animals had a vegetative valvular endocarditis along with fibrinous pericarditis and passive congestion in the liver, consistent with heart failure. In the younger animals there was a fibrinous polyarthrosynovitis. *Erysipelothrix rhusiopathiae* was cultured from both the heart valves of the older animals and a joint in the younger animals.

## **BIRDS**

### **Commercial Layers**

#### **Erysipelas**

An second episode of acute Erysipelas was diagnosed in a flock of 68 week old free range layers with ongoing mortality following a recent flock diagnosis of E coli and Erysipelothrix septicaemia. Heavy pure growths of *Erysipelothrix*

rhusiopathiae were obtained on routine cultures of livers and spleens from septicaemic carcasses

### **Colisepticaemia**

*E coli* septicaemia and egg peritonitis was confirmed as the cause of increased mortality in 2 flocks of free range layers aged 28 and 44 weeks respectively. Post mortem examination revealed septicaemic carcasses with swollen livers and spleens, and egg peritonitis. Profuse pure growth of *E coli* was cultured from spleen liver and peritoneum.

### **Broiler Chickens**

#### **Coccidiosis**

Acute caecal Coccidiosis due to *Eimeria tenella* was seen in 25 day old broilers with a history of increased mortality and evidence of blood stained droppings. Post mortem examination revealed blood filled caecae with slight mottling of the serosal surface.

#### **Riboflavin deficiency**

Riboflavin deficiency was diagnosed in two submissions of broiler chickens aged 17 and 21 days, with a history of stunting, lameness and reluctance to move. Though curled toe paralysis was apparent in some of the live birds from the younger flock, sciatic nerves examined at post mortem examination in both flocks were not particularly enlarged. Histological examination revealed lesions consistent with riboflavin deficiency consisting of focal intraneural oedema and marked Schwann cell hyperplasia with numerous mitotic figures. Supplementation with multivitamins was reported to have been effective.

#### **Spondylitis**

Chronic Spondylitis was seen in 49 day old broilers submitted with a history of lameness and poor condition. Post mortem examination revealed a large ventral swelling of the spine centred on the body of the free thoracic vertebrae "T4" and also affecting the articulation of adjacent vertebrae. Bacterial cultures produced good growth of Enterococcus-like colonies with biochemical features consistent with *Enterococcus cecorum*.

### **Broiler Breeders**

#### **Enterococcus hirae**

Increased mortality in 6 day old chicks was attributed to *Enterococcus hirae* septicaemia-encephalomalacia. Post mortem findings included congested lungs and enlarged and pale spleens. Histopathological examination of brains revealed lesions of encephalomalacia in the brainstem and cerebrum, but not in the cerebellum, consistent with *E. hirae* associated encephalomalacia. Routine bacteriological cultures of livers, lungs and spleens yielded heavy virtually pure growths of *Enterococcus* species with biochemical features consistent with *Enterococcus hirae*.

## **MISCELLANEOUS SPECIES**

**TB in two cats**

*Mycobacterium bovis* infection was confirmed in two cats on separate premises. One cat was a 6-year old Domestic Short Hair and the other was a 3-year old of similar breed. The 6-year old cat had respiratory lesions and the 3-year old cat had alimentary lesions. As *M. bovis* infection is now notifiable in all species Animal Health was informed of the results.

**Malignant Catarrhal Fever in Bison**

A blood sample was submitted to Luddington from a yearling bison in a group of ten, to investigate the cause of persisting pyrexia, increased respiratory rate and a nasal discharge, progressing to corneal oedema and inco-ordination after a week. Ovine herpesvirus-2 DNA was detected in the blood sample, a result consistent with a diagnosis of Malignant Catarrhal Fever as the cause of the clinical signs described.

**WILDLIFE**

A wild roe deer kid culled because of very poor body condition was submitted to Langford. The liver had a number of raised white fibrous foci of approximately 1 cm in diameter. Haemorrhagic tracts were seen under the capsule and in cut sections together with fibrosis of the bile ducts. Large numbers of fluke of varying sizes were identified indicating chronic active fasciolosis as the causing ill thrift.