



VLA Monthly Surveillance Report for PIGS MAY 2008

Defra's Food and Farming Group funds the VLA's pig surveillance work as part of the Veterinary Surveillance Strategy

Respiratory Diseases

PRRSv

Active PRRSV infection with bacterial involvement were diagnosed as the cause of sneezing and hacking coughing in piglets from 10 days old in about half the litters born in a 400-sow indoor breeder finisher unit with wasting in weaners. Sows were vaccinated with live PRRS vaccine. In the group of pigs submitted, fibrinous pleurisies, pericarditis and pneumonias were found. Histopathology revealed purulent bronchointerstitial pneumonias and *Streptococcus suis* 2 and *Bordetella bronchiseptica* were both isolated. Immunohistochemistry revealed evidence of active PRRS virus infection in pneumonic areas of lung. No swine influenza virus was isolated.

PRRS virus infection was implicated in coughing and increased mortality in eight-week-old weaned pigs with 10 deaths from the group of 900. Two pigs were submitted with diffuse lung changes and interstitial pneumonias were confirmed by histopathology. PRRS virus was detected in one pig and *Streptococcus suis* 2 was isolated from both – from the lung in one and from the meninges in the other.

***Streptococcus suis* serotype 2**

Severe coughing in 75 of 1500 pigs from eight-weeks-old was investigated by submission of three pigs which had just completed a six day course of water medicated chlortetracycline. Thirty deaths were reported. Marked fibrinous polyserositis was present in two of the pigs and a necrotic typhlocolitis in the third. *Streptococcus suis* 2 was isolated from the polyserositis lesions. No swine influenza virus was isolated and histopathology was not suggestive of viral involvement. The history of recent antibiotic treatment means that *Haemophilus parasuis*

involvement could not be ruled out. *Salmonella* Typhimurium phage type U288 was isolated from the necrotic large intestine of the third pig.

Swine Influenza

Two live pigs aged sixteen days were submitted from a 900 sow breeding/rearing farm where all eleven piglets in one litter were affected and displaying respiratory distress. Postmortem examination revealed dark red consolidation affecting the lungs of both pigs, one with 25% and one with 75% consolidation. In the latter only the extreme caudal sections of caudal lobes remained unaffected. Histopathology indicated SIV infection with lesions of severe sub-acute/chronic broncho-interstitial pneumonia. Virological testing isolated avian influenza virus A/SW/England/195852/92.

Skin Diseases

***Staphylococcus hyicus*, “Greasy pig disease”**

Fifty per cent of growers were affected from about 20 kgs with skin lesions which persisted for several weeks and consisted of scabbed circular dark red areas that were 0.5 to 2 cms in diameter and moderately well demarcated. *Staphylococcus hyicus* was isolated as the predominant growth together with *Staphylococcus aureus*. A typhlitis was also present in the pig and *Salmonella* Typhimurium phage type 193 was isolated.

Severe exudative epidermitis was described in 10% of piglets from two-days-old on a 520-sow indoor breeder finisher unit and the mortality was approximately 3%. Three skin swabs were submitted; *Staphylococcus hyicus* was isolated from two and *Staphylococcus aureus* from one. The isolation of *Staphylococcus aureus* is consistent with greasy pig disease and ceftiofur treatment of piglets at one-day-old proved effective in preventing further cases, together with management interventions including adjusting feeding of sows around farrowing. No teeth clipping is practised on the unit and an increased incidence of facial eczema and skin disease in piglets was considered likely to be secondary to a degree of hypogalactia post-farrowing, increasing competitive behaviour between piglets. .

Enteric Disease

***Brachyspira pilosicoli*, “Porcine Intestinal Spirochaetosis”**

A ten-week-old pig was found depressed and died the following morning in spite of antibiotic treatment. The pig was in a poor body condition with very sunken eyes. The large intestinal contents were very watery and the mesocolon was oedematous. The associated mesenteric lymph nodes were enlarged. Selective culture for *Brachyspira* spp. demonstrated the presence of *Brachyspira pilosicoli*. PMWS was a likely underlying factor given the poor body condition and the mild to moderately enlarged and congested superficial lymph nodes found in this weaner

***Brachyspira hyodysenteriae*, Swine Dysentery**

Swine dysentery was confirmed following culture of *Brachyspira hyodysenteriae* from two of three live piglets submitted from a small breeding herd of six sows. Up to 10 piglets had been affected from two litters. *Brachyspira innocens* was isolated from the other piglet. Typical lesions of colitis were visible histologically.

Nervous Disease

Meningitis due to *Streptococcus suis*.

A ten-day-old piglet which was being reared in an outdoor pig arc was submitted with a history of four deaths in a group of eight. A severe anaemia was noted at necropsy and laboratory testing detected a low level of iron in the liver at 3293mmol/kgDM (ref range 5000-120000/kgDM). *Streptococcus suis* was isolated from a meningeal swab and concurrent meningitis and severe anaemia were therefore diagnosed. There was no evidence of PCV2 or PRRSV infections.

Systemic Diseases

PDNS

On-farm post mortem examinations revealed wasting, skin lesions and enzootic pneumonia-like lesions in the lungs of one pig and pleurisy and peritonitis in a second pig. From a group of 1600 finishing pigs aged 15 to 18 weeks, approximately 10% were affected and mortality had increased over the last three months to 7.5%. *Pasteurella multocida* was isolated from the lungs of both pigs. Histopathology confirmed PDNS in the pig with skin lesions and active PCV2 infection (by IHC) in the lymph nodes of the second pig. PRRS virus was not detected.

***Salmonella* Typhimurim and PRRS**

Clinical signs of diarrhoea, wasting and malaise affected one to two per cent of 12-week-old pigs from a group of 900 growers and finishers. PRRSV vaccine use in sows stopped in August 2007. Breeding pig replacements were last introduced in February shortly before the supplier reported a PRRSV breakdown. Two pigs in poor bodily condition were received and both had a severe colitis and typhlitis due to *Salmonella* Typhimurium. Although respiratory disease was not noted clinically, both pigs had a pleuropneumonia and, in the most severely affected pig, PCV2 and PRRSV involvement in the pneumonia was confirmed by immunohistochemistry with PRRSV involvement in the less severely affected pig. PRRSV was detected by PCR in the spleen of one pig and PCV2-like viral inclusions were present in gut-associated lymphoid tissue of the more severely pneumonic pig. Both pigs had profuse growths of *Pasteurella multocida* from the lungs. In addition, one of the pigs had a swollen stifle joint and *Mycoplasma hyosynoviae* was detected in joint fluid. These cases highlight the effects of immunosuppression with resultant multiple bacterial infections.

Septicaemia due to *Streptococcus suis* serotype 1

Streptococcal septicaemia due to *Streptococcus suis* type 1 infection was diagnosed as the cause of sudden death of 30% of two to three-week-old piglets born to three gilts in adjacent outdoor paddocks. Several live piglets were also seen to have swollen hock joints. The farm was setting up a small new Berkshire herd of five sows. Amoxicillin treatment of all affected and all remaining unaffected piglets, prevented any further losses and prophylactic treatment of future litters is planned.

PCVAD (Porcine Circovirus-Associated Disease) (formerly known as PMWS)

Porcine Circovirus 2 – associated disease was diagnosed in weaned/growing pigs from three herds, where carcasses were submitted for necropsy. In the first herd, which had a wasting problem, gross pathological findings included poor body condition, pulmonary

consolidation/abscessation, pleurisy, pericarditis, and enlarged lymph nodes. Histological lesions suggested PCV-2 infection and viral antigen was demonstrated by immunohistochemistry (IHC). PRRS virus was also detected by IHC in association with pulmonary pathology.

In the second herd, disease was again characterised by wasting. Gross findings included pulmonary consolidation/abscessation, enlarged lymph nodes, and polyserositis. PMWS was diagnosed by histopathology and IHC detection of PCV-2.

The third herd had increased incidence of respiratory disease. Pulmonary consolidation/abscessation and fibrous pleural adhesions were identified grossly. As well as PCV-2, there was bacterial involvement with *Pasteurella multocida* and *Mycoplasma hyopneumoniae*.