

NADIS disease bulletins are written specifically for farmers, to increase awareness of prevalent conditions and promote disease prevention and control, in order to benefit animal health and welfare. Farmers are advised to discuss their individual farm circumstances with their veterinary surgeon.

Erysipelas

Erysipelas is a bacterial disease of pigs that can also occur in turkeys and sheep. It is caused by the organism *Erysipelothrix rhusiopathiae*, which is widespread in the environment and carried by many wild animals without being evident. The pig is particularly susceptible to it and, in the absence of vaccination, the disease can be a major problem.

There are many different strains of the bacteria, with vaccines only covering the 2 most common strains. Routine strain identification is not performed in the UK but experience suggests that vaccination is effective and the strains not covered are rare.

Clinical Presentation

The disease can present in a multitude of forms:-

- 1) Peracute. Either presenting as sudden death or as a severe septicaemia with high temperature, lethargy, inappetance, lameness. Death is rapid. This form is most commonly seen in growers, although occasionally occurs in young adults.
- 2) Acute. The classic “Diamonds” in which body temperature will rise dramatically and red raised diamond shaped blotches appear, particularly over the back. The pigs will be lethargic and reluctant to move about.
- 3) Reproductive. As a result of acute infection in the pregnant sow abortion can occur at any stage of pregnancy. Pigs born to sows/gilts infected in late pregnancy may be born alive and develop classic “Diamonds” within a few days of birth.
- 4) Chronic. The after effects of Erysipelas infection can be extremely serious with a number of possible consequences:-
 - a) **Skin necrosis.** Following recovery from the acute form, areas of skin will die and slough off. This can particularly affect the ears, skin over the scrotum and occasionally the lower legs.
 - b) **Lameness.** As part of the recovery process, the immune reactions in some individuals may be excessive and produce an arthritis, which is severe and irreversible. In these cases, the organism is not found in the joints as it has long since passed.
 - c) **Endocarditis.** Following acute infection, the organism can “seed” onto the valves of the heart and grow into cauliflower like lesions which compromise heart function. Affected animals usually drop dead. It is unusual, though not impossible, to see this form of the disease without having seen “Diamonds” in the 2-3 weeks preceding in at least some of the pigs. Occasionally, this form of Erysipelas will present as an explosion of mortality in growing pigs.

Treatment

The acute form of the disease is rapidly and effectively treated with Penicillin, although inadequate dosing can allow the chronic form of the disease to prevail. Raised body temperatures will come down to normal within 8-10 hours of injection and apparent full recovery occurs within 24 hours, provided early treatment is given.

Where an outbreak of disease occurs within a population, mass medication using either penicillin or amoxycillin in water or in feed may be necessary. This is particularly necessary in outbreaks of the chronic endocarditis form of the disease.

The chronic lameness form of the disease does not respond to treatment and pigs require humane destruction.

Diagnosis

The diagnosis is usually reached on clinical or post mortem examination, by culture of the causative organism in the laboratory. The organism is usually easily grown from heart lesions in endocarditis cases, and can be found within the body of aborted piglets.

The reproductive and chronic lameness forms of the disease require diagnosis by serology, measuring levels of immunity to Erysipelas. Care is needed in interpreting single samples but, in general, a clinical case will give high titres (1:1000 or more is common) whereas a titre of ~ 1:160 or less tends to suggest either reaction to vaccine or contact with infection without disease.

Control

The pig is so susceptible to Erysipelas and the organism so ubiquitous that it should be regarded as standard practice to vaccinate breeding stock using one of the commercially available vaccines. A primary course of 2 doses (separated by 2-4 weeks as appropriate) is needed, followed by booster doses given every 5-6 months.

The sow is most susceptible to disease in late pregnancy and booster vaccines given 3 weeks prior to farrowing will give maximum protection to both sow and litter.

Do not forget boars.

It is not usual to vaccinate growing pigs unless there is known to be a problem, or in breeding stock where the chronic arthritic form can compromise breeding ability.

The organism will survive many months in damp conditions and the disease is seen far more commonly in deep straw yard finishing systems than in fully slatted finishing accommodation, particularly in warm weather.

Rodents and wild birds carry the organism and contamination of feed or environment can often be the trigger for disease to occur. Proper control of such animals is an essential component of all disease control programmes.

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