

Papular dermatitis

Papular dermatitis (PD) is a descriptive term for skin lesions observed in some pigs at the abattoir. PD lesions can be seen in live pigs on the farm but the lesions become more obvious after the abattoir scalding process. By far the most common cause of such lesions is hypersensitivity to sarcoptic mange mites. Other fly bites may cause similar lesions but with a different pattern and distribution.

Sarcoptic mange is economically important due to the consequent loss in productivity (growth rate in the feeding herd can be reduced by up to 20%) and welfare implications of the disease. The British Pig Health Scheme (BPHS) provides information over time of the level of PD in pigs at slaughter; this must be used as a basis for health planning and managing PD.



To quantify the problem using the data from your BPHS report

To effectively control Papular Dermatitis problems in the growing herd

To improve herd health and efficiency

A number of agents and diseases can cause papular dermatitis, consequently PD does not confirm the presence of a specific condition. High levels of PD lesions in slaughter pigs are highly suggestive of the presence of mange but in some cases, further investigation may be required.

PD appears as small, raised red spots on the skin. In the case of mange, these spots are most frequently seen around the neck behind the ears, along the flanks and over the hams. The ears are a favoured site of infestation for sarcoptic mange mites and in live pigs with chronic infestations, crusting lesions may be seen within the ears.

Sarcoptic Mange

- A parasitic disease of pigs caused by the host-specific mite *Sarcoptes scabiei* var. *suis*
- Can persist in the environment for up to 3 weeks if conditions are ideal, contaminated transport can therefore spread the disease
- Spread from pig to pig by direct contact or possibly by vectors
- The mite burrows into the skin and lays eggs in tunnels within the skin
- Affected pigs are often seen rubbing against any available surface and ear shaking
- Most commonly seen in pigs of 8-12 weeks of age

Other External Parasites

- Includes flies, mosquitoes, lice and, other mites
- Can cause considerable skin irritation, sometimes resulting in loss of blood
- Lice may be visible on the surface of the skin
- If mange treatment is carried out, lice are relatively uncommon because the mange treatment will kill them

Impact of Papular Dermatitis

Sarcoptic Mange

This is one of the few skin conditions to have any known economic significance. The loss of productivity and welfare implications can:

- Increase piglet mortality due to overlying by affected sows and gilts
- Reduce growth rates by up to 20%
- Worsen feed conversion efficiency by up to 12%
- Lead to a reduced market value and carcass downgrading; in severe cases affected skin can account for up to 8 kg of a 100 kg pig and be condemned due to lesions
- Cause apparent infertility since chronically infected boars may fail to work due to discomfort
- Increase maintenance costs due to the damage caused by pigs rubbing against fixtures
- May predispose affected pigs to other skin diseases eg greasy pig disease



Table 1 The effect of Mange infestation on pig performance from 50-80 kg

Treatment	Ad libitum fed		Restrictive fed	
	Control	Mange infested	Control	Mange infested
Average daily gain g/day	836	835	671	655
Food conversion efficiency	2.85	2.91	2.60	2.68
Average dermatitis score	0.06	0.87	0.18	1.06

Source: Davies, 1995

External Parasites

- No direct impact on the performance of the pig has been measured
- Are involved in the transmission of other diseases - eg flies can mechanically transmit bacteria and viruses from one pig to another, directly in the case of biting flies or indirectly by contaminating feed
- Can also transmit infections from one pig farm to another if they are less than 3 km (2 miles) apart
- Are a nuisance to the pigs and stock people leading, for example, to aggressive sows at farrowing

Management guidelines

Mange

If a herd is free from mange, it is one of the easiest diseases to keep out because it can only be introduced by carrier pigs, however once introduced it can become endemic.

To keep mange out:

- Be vigilant when sourcing replacements and examine incoming pigs carefully during their period of isolation
- Treat all incoming stock with avermectin two weeks prior to integration, following veterinary advice
- Operate good biosecurity: Isolate all incoming stock in suitable facilities (ideally situated on the perimeter of the unit), operate on an all-in all-out basis and clean and disinfect between batches

Where mange is endemic in a herd, a vigorous and persistent program of control is needed; this should be split into breeding and feeding herds. Discuss with your vet.

Breeding Herd

- Treat all animals simultaneously where possible, either by injection or by medicating feed; repeat every 6-12 months
- Do not forget to treat boars, they are in direct skin contact with breeding females and can be chronic carriers

Feeding Herd

- Young pigs will pick up the mite either from the sow, from contact with older infested pigs or from a contaminated environment

- Provided the disease is controlled in the breeding herd and that all-in all-out pig flow into clean accommodation is practised, there is often no need to treat growing pigs
- In units with continuous flow finishing, this is likely to be the place where problems may be seen
- Where these criteria are not followed, in-feed treatment soon after weaning is effective, usually given in the second diet one week after weaning for 7 days
- Pay particular attention to hospital areas as, although they should be regularly de-populated and cleaned, they rarely are. Where mange is present, treat pigs going into and coming out of pens as routine (unless going direct to slaughter)
- Prolonged meat withdrawal periods for most of the effective medication forms make a whole herd eradication program on a breeder/feeder farm difficult without partial depopulation
- A range of protocols have been developed to eradicate mange, involving a combination of medication and hygiene measures. Consult your vet to discuss the options

BPMS Reports

The BPMS report provides an average PD score for every batch of pigs on a scale of 0-3. The report also shows the percentage of pigs affected. A variation in score may be seen depending on the time of the year, environmental conditions, type of housing and, if definitely due to mange, on the treatment programme in place.

For more information about the BPMS call 01463 233184 or visit www.bpms.org.uk.

For further information on this topic refer to the NADIS Disease Focus Sheet, www.nadis.org.uk.

