

Enzootic pneumonia

Enzootic pneumonia (EP) is the most common respiratory disease seen in pigs in the UK. It is estimated that EP is present, clinically or sub-clinically, in around 80% of pig herds in the UK causing reductions in daily gain and feed conversion efficiency of up to 10%, as well as pre-disposing pigs to other respiratory diseases. Losses from EP can be as high as £3 per pig.

The British Pig Health Scheme (BPHS) provides a record over time of the levels of lung damage in pigs at slaughter that can be used as a basis for health planning and managing EP.



- To quantify the problem using the data from BPHS reports
- To effectively control endemic EP and move towards achieving an EP-free herd
- To improve the growth and efficiency of the growing herd and reduce variation
- To improve animal health and welfare in both short and long term

Mycoplasma hyopneumoniae is the main cause of EP but secondary infections can influence the severity of the disease. EP affects the lower areas of each lung lobe causing collapse and consolidation. This can be seen as plum/grey areas (lesions) of the lung at slaughter. Pigs with EP generally have a harsh, dry cough that is worse after pigs are disturbed or moved. EP rarely kills pigs unless there are other infections present.

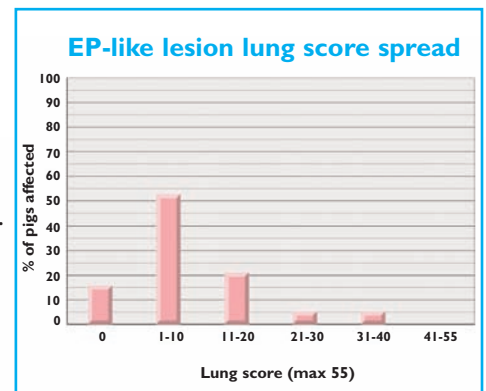
BPHS reports

The BPHS report provides an EP-like lesion score for every batch of pigs on a scale of 0-55 (0 representing no visible lesions and 55 representing extensive lesions). It is important to note that organisms other than *Mycoplasma hyopneumoniae* can cause lesions that are indistinguishable from EP; hence lesions are reported as 'EP-like' lesions.

The bar chart on the report shows the distribution of lung scores, giving an indication of the level of infection within the herd.

What were your recent BPHS EP-like lesion scores? Can you see an emerging trend? Discuss these with your vet and ensure an appropriate strategy is in place to maintain or control the status of your herd(s).

Not a BPHS member or need more information about the Scheme? Call 01463 233184.



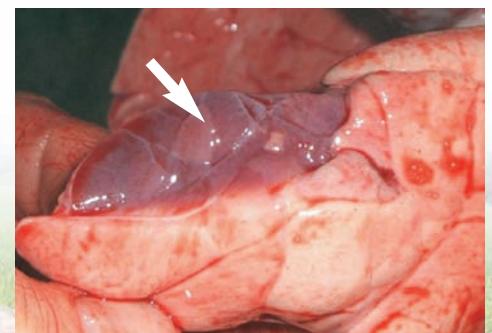
Consider the following recommendations:

Buy stock from an appropriate source, depending on your herd health status.

Isolate incoming pigs for 6–8 weeks.

Optimise stocking levels and ventilation and ensure a thorough cleaning and disinfection programme is in place.

In heavily infected herds it may be necessary to consider a partial or complete depopulation-repopulation strategy. This should be discussed with your vet.



Consolidation in the lobe.



Impact of EP

Chronic EP infections will result in poorer feed conversion efficiency, reduced daily gain (Table 1) and increased variation in weights between pigs. In acute infections greater performance reductions will be seen.

Table 1 Effects of EP on performance

	EP-free	Mild	Moderate	Severe	Very severe
Lung score	0	5	10	15	20
Average Daily Gain (g)	750	731	713	694	675
Feed Conversion Ratio	2.75	2.8	2.85	2.95	3.05

Source: Hall 2006; Burch 2007

Increased days to slaughter means more feed, labour, electricity, straw and water are needed. Even a low level of infection can significantly increase the cost of production. Vaccination can be a cost effective way to reduce the financial loss resulting from EP infection (Table 2).

Table 2 Cost of EP infection

Lung score	1	5	10	15	20
Cost of EP (£/pig)	0.66	1.30	2.18	3.65	5.71
Cost of EP + vaccination* (£/pig)	n/a	0.81	1.21	1.70	2.38
Net benefit after vaccination (£/pig)	n/a	0.49	0.97	1.95	3.33

*Vaccination can reduce EP-like lesions by up to 70% • Source: Hall 2006; Burch 2007

Management guidelines

Maintaining an EP-free herd

- This is only feasible in regions of low pig density as EP can travel up to 5 km on the wind.
- Only buy EP-free stock and only buy from a reputable supplier. If possible stock should come from the same source herd every time.
- Isolate incoming pigs for 6–8 weeks (off-site). During this period check the status of the source herd to ensure it has remained EP-free. Pigs can be screened using a blood test before entering the main herd.
- Alternatively, operate an all-in all-out policy, ideally by site, with thorough cleaning and disinfection between batches.

Controlling endemic EP

Effective control relies on an appropriate integrated management plan, which will be based around the following general principles:

- Environmental management that aims to reduce build up of the organism and reduce chill stress on the animals.
- Reduction of stress; stress compromises pigs' immune system providing an environment which allows *Mycoplasma* to invade the respiratory tract.
- Vaccination against *Mycoplasma*. None of the vaccines prevent EP 100% but can reduce lung lesions by up to 70%; your vet will be best placed to advise on the most suitable strategy for your production system.
- Strategic use of antibiotics.

No one approach will apply to all farms. Management of the environment and stress is dependent on the design of the piggery and the facilities available and will subsequently influence the success of any programme based on vaccination or the strategic use of antibiotics. Work with your vet to develop a management plan that is appropriate for your farm.

For further information on this topic refer to the NADIS Disease Focus sheet.