

Pig Health Scheme

Healthy pigs for healthy profits



Contents

- 3 Introduction
- 4 Using your Pig Health Scheme report
- 5 What does each section of the report mean?
- 6 What should I do when I receive my report?
- 7 Interpreting the graphs
- 8 Disease prevalence
- 9 Lungs
- 14 Heart
- 15 Liver
- 17 Tail
- 18 Skin
- 19 Further reading



Introduction

The Pig Health Scheme is a development of the former British Pig Health Scheme (BPHS). The assessors on the scheme monitor English pigs at slaughter for prevalence and severity of disease to help pig producers and their vets to reduce levels of disease within their herds. Individual farm data can be used to benchmark against other members of the scheme. Assessments are carried out by specially trained veterinary assessors at designated abattoirs throughout England, with all of the main pig abattoirs covered as part of the scheme. Assessment dates are published in advance so producers can make sure their pigs are sent on the designated assessment days.

Membership of the scheme is free to all producers – all they have to do is sign up and their reports will automatically be sent to them after each assessment.

This guide gives a brief description of the conditions assessed, the scoring system and an explanation of the reports that members will receive.

Reports can be used to inform and monitor the health status of a producer's herd and can be used to inform decisions around disease control. Ultimately the aim is to improve the health and welfare of pigs and to help reduce production losses throughout the supply chain. Implementing a health plan is the most cost-effective way to reduce disease.

All Pig Health Scheme members receive three different types of reports:

1. **Individual Batch Report:** summary data from the pigs inspected at the abattoir, with graphical representations. This will be sent within 48 hours of the abattoir monitoring having taken place.
2. **Unit Comparison Report:** a comparison between your unit(s) and all other units monitored during that quarter. This will be sent at the end of the quarterly monitoring period.
3. **Time Comparison Report:** a comparison of historical data for the unit on a rolling basis of up to two years once data is available. This will be sent at the end of the quarterly monitoring period.

Using your Pig Health Scheme report

The first report is a basis on which to compare future reports

- Use the data to draw up plans with your vet, nutritionist, marketing group and staff

Subsequent reports can be used as personal benchmarks

- Compare with your unit's physical performance data
- Be careful when interpreting a single batch report though. It may not be representative of what is happening. However, changes and high scores should be discussed with your vet

✓ **Good scores:**

Continue to monitor herd health closely

Changes/deteriorations can be identified at an early stage so remedial action can be taken in good time

✗ **Poor scores:**

Take action

The cost of individual treatments, additional feed and labour quickly add to production costs and losses at the abattoir

Poor herd health quickly results in overstocking caused by reduced growth rates

Slapmark

If the assessing vet had trouble reading your slapmark, data could be lost.

- Slapmarks should be clearly applied to each front shoulder of the pig
- Ensure all pins are intact, straight and sharp
- Ink the pad well between every pig
- Ensure the slapmark is clean



Figure 1. A good slapmark: legible before and after slaughter



Figure 2. A poor slapmark. Just a few missing pins can affect the quality

Want to find out more about the scheme and how to join?

Call the AHDB Pork Health and Welfare team: 024 7647 8893 or visit the AHDB Pork website: pork.ahdb.org.uk

What does each section of the report mean?

Below is a fictitious example of a Pig Health Scheme individual batch report with explanations for each section.

‘Pigs submitted’ is the total number of pigs under a given slapmark sent to the

abattoir on the specific date. Up to 50 of these pigs are assessed (pigs examined).

It is essential you look at the **comments box** as certain conditions mentioned may require a discussion with your vet.

Name of scheme
Consignment Report

Date of Consignment
Herd Mark
Name of Farm
Farm Address
Name of Abattoir
X number of pigs submitted
X number of pigs examined

Comment Box

Alerts you to areas of concern.

The quality of the slapmark is recorded here on a scale of 0–2.
A score of 2 indicates good quality marking, whereas a score of 0 indicates poor legibility.

Body part	Condition	Pigs affected in this consignment	Score for this consignment (%)	Score for previous consignment (%)	Three-batch average (%)	National average
Lungs	Enzootic pneumonia-like lesions (avg)	9	1.05	2.50	2.30	3
	Viral pneumonia distribution	10	20	0	10	5
	Pleuropneumonia: chronic	8	15	2	9	7
	Pleuropneumonia: acute	3	5	0	3	6
	Abscess	0	0	0	0	3
	Pyaemia	0	0	0	0	3
Liver	Milk spot	0	0	0	0	5
	Hepatic scarring	0	0	6	3	5
Other	Pleuritis: mild	0	0	0	0	7
	Pleuritis: severe	14	28	30	29	4
	Pericarditis	7	14	15	15	5
	Peritonitis	0	0	0	0	5
Body	Tail bitten	0	0	0	0	5
Skin	Papular: dermatitis	3	4	0	0	4.72

Non-coloured boxes indicate low scores, suggesting there are low levels of disease.

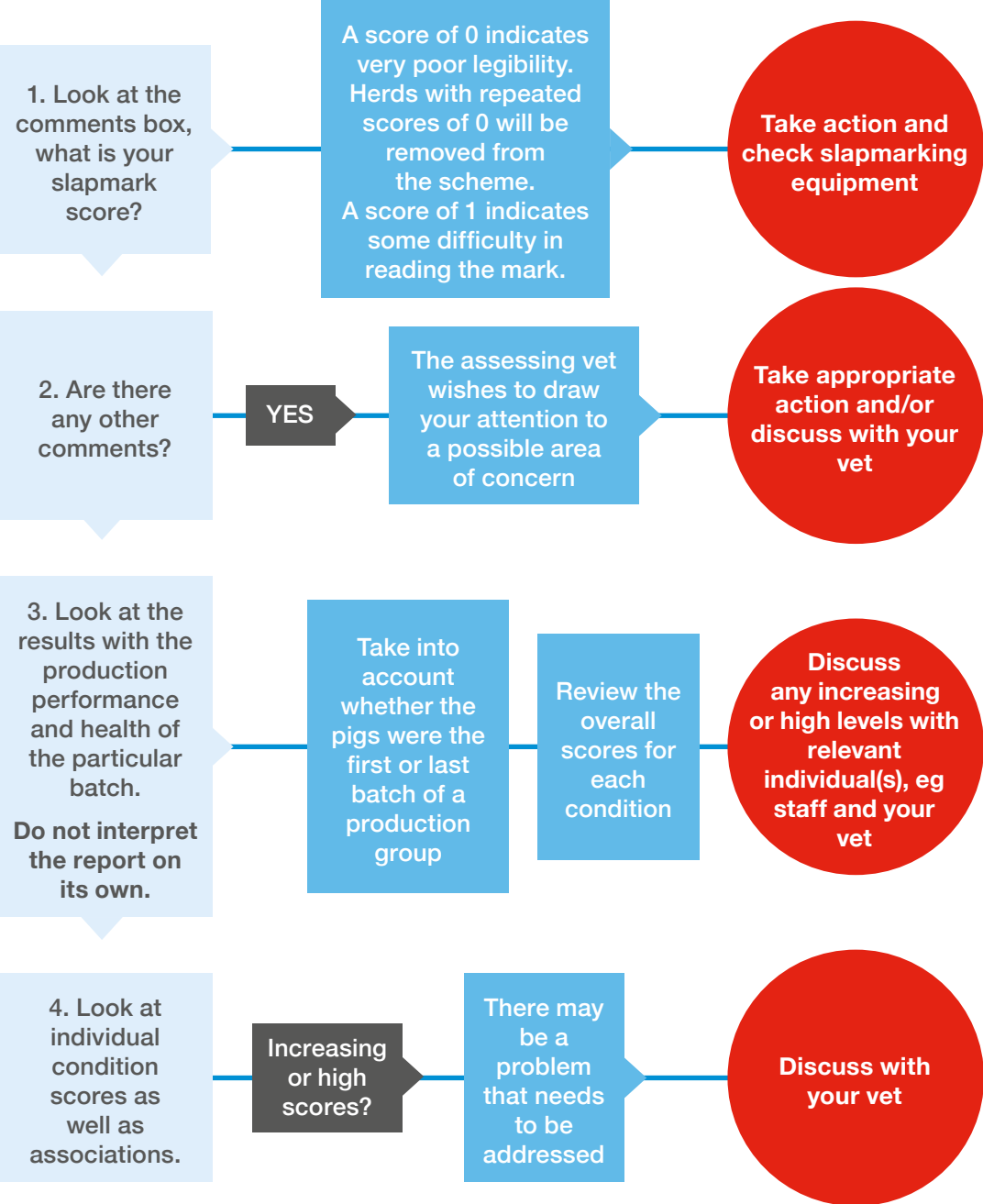
Orange areas indicate high levels of disease within a consignment that fall within the highest 30 per cent of national scores.

Yellow areas indicate moderate level of a condition.

Figure 3. Example of an individual batch report

What should I do when I receive my report?

Check the date of the assessment and slapmark so you know which pigs were assessed.



Some of the conditions assessed can have a serious impact on growth efficiency.

Interpreting the graphs

The graphs show the percentage of pigs with a particular condition from the individual batch, in comparison to your farm average. Scores for individual batches should be monitored against your farm average.

What does your graph look like?

EP-like lesions

EP-like lesions are examined on a scale of 0–55. A score of 0 indicates there are no EP-like lesions and a score of 55 is an indication of extensive EP-like lesions. All pigs examined are given an EP-like score.

Cause for concern

A rise above farm average should be discussed promptly with your vet.

Columns to the right of the graph indicate a high score in this consignment and might indicate a health problem.

Figure 4 indicates the herd is generally healthy, with an average of 50 per cent of pigs scoring 1–10 for EP-like lesions. However, for this consignment of pigs, the EP-like lung score is particularly high.

Pleuritis association

The graph shows the percentage of pigs with pleuritis (PL) and the percentage found with PL in combination with EP-like lesions (PL+EP) and in combination with pericarditis (PL+PC). The graph also shows the percentage of pigs with milk spot.

Actions

Farm averages need to be monitored

Even a steady increase in the farm average for a particular condition could be decreasing your profits – discuss with your vet before it's too late.

Cause for concern

High farm averages for specific conditions may indicate a recurring health problem on farm – a discussion with your vet is essential.

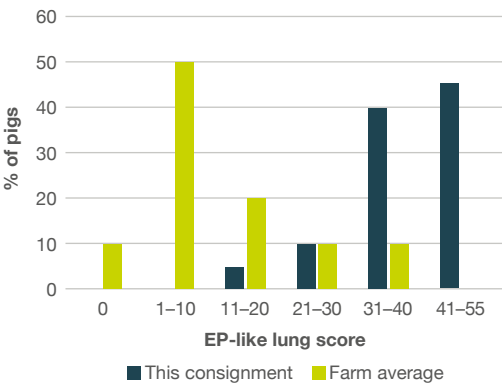


Figure 4. Example of EP-like lesions chart

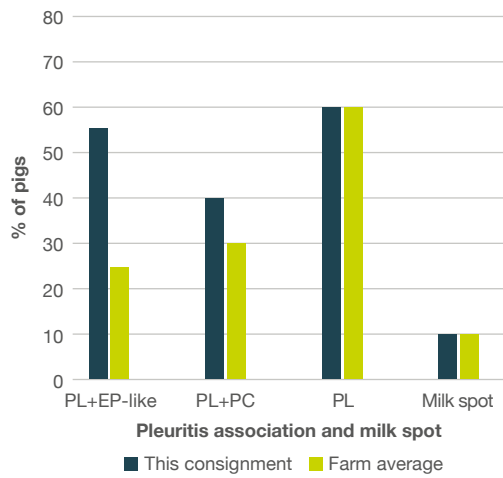


Figure 5. Example of Pleuritis association chart

Disease prevalence

The black line represents your farm score. You can use these graphs to compare your farm against national scores.

Enzootic pneumonia-like lesions

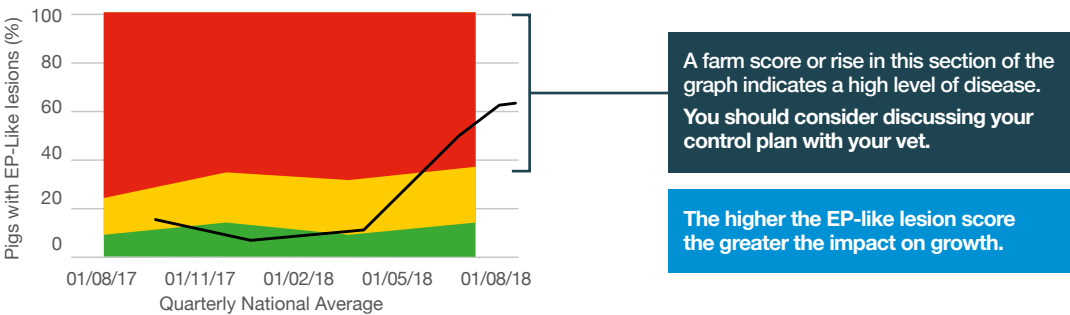


Figure 6. Pigs with EP-like lesion example graph

Pleuritis

Pleuritis may be seen in healthy pigs from healthy herds without other conditions.

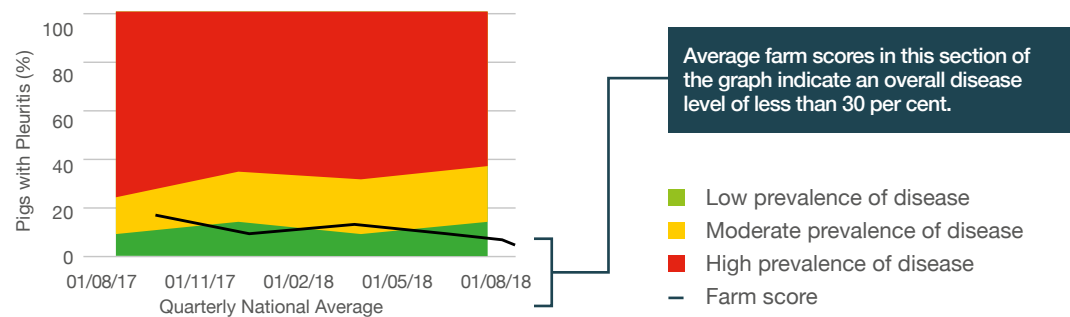


Figure 7. Pigs with pleuritis example graph

Table 1. Assessment data for graph examples

Date assessed	07/09/17	29/11/17	04/03/18	25/05/18	09/07/18	20/07/18
Enzootic pneumonia-like lesions						
Number of pigs submitted	210	200	180	200	150	100
Number of pigs affected	34	16	20	96	93	63
Pleuritis						
Number of pigs submitted	200	175	100	200	160	200
Number of pigs affected	32	14	11	16	8	6

Lungs

Enzootic pneumonia-like lesions (EP-like)

What does it look like?

Darkened purple/grey areas

- Rubbery areas
- Heavily diseased lungs show a larger proportion of damage

How is it scored?

- Score 0 = not present

Totally diseased:

- Score 10 for each cranial and middle lobe
- Score 5 for each caudal lobe and accessory lobe
- Maximum score per pig: 55

Variation in scores:

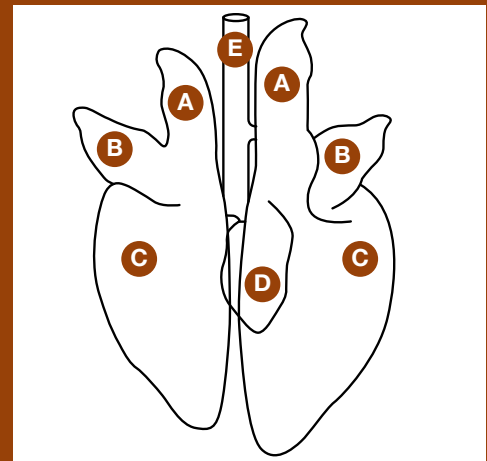
- In new outbreaks of pneumonia
- Unstable health conditions may vary the score
- Non-vaccinated pigs
- All-in all-out batches of different health status
- Wide variation is unusual in herds that are vaccinated or have stabilised EP
- Similar lesions can be caused by other infections and therefore not all will be true EP, hence 'EP-like'

The higher the score, the greater the impact on growth efficiency.

Organisms other than *Mycoplasma hyopneumoniae* can cause lesions that are indistinguishable from EP. This will be reported as EP-like lesions on the lungs.



Figure 8. EP-like lesion. Note the darker areas in the affected tips of some of the lobes



- A. Cranial lobe (cranial = towards the head)
- B. Middle lobe
- C. Caudal lobe (caudal = towards tail)
- D. Accessory lobe
- E. Trachea (windpipe)

Figure 9. Diagram of lung lobes

Lungs

Pleuropneumonia (PP)

- Bacterial disease of the lung and its surface
- Cause: *Actinobacillus pleuropneumoniae* (APP)
- Can be acute (recent) or chronic (long-standing)

Acute: fresh, active lesions typical of PP

What does it look like?

- Bloody fluid will ooze from the cut surface
- Swollen, firm and dark red

How is it scored?

The percentage of pigs and the number of individuals with acute lesions.

- Score 0 = not present
- Score 1 = present

Chronic: old, established lesions typical of PP

What does it look like?

- Solid black to red raised areas of pneumonia
- Film of pleuritis that might be stuck to the chest wall

How is it scored?

The percentage of pigs and the actual number of individuals with chronic lesions.

- Score 0 = not present
- Score 1 = present

Possible causes:

- Can get acute and chronic in the same batch, depending on when infection occurred
- Can indicate poor biosecurity/hygiene at the unit

Variation in scores:

- Usually not all pigs are affected at the same time

- Environmental conditions affect levels, e.g. ventilation, humidity, cleaning and disinfection
- The bacteria that cause PP lesions also cause pleuritis; therefore, a rise in the number of pigs with pleuritis may also be seen

Chronic infection may be a feature of pigs that take the longest to reach slaughter weight.

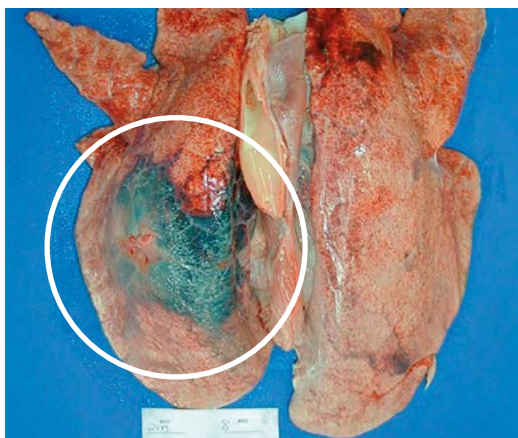


Figure 10. Pleuropneumonia



Figure 11. Swollen dark red area of pleuropneumonia

Pleuritis (PL)

Inflammation of the surface of the lungs (the shiny membranes covering the surface); used to be referred to as pleurisy.

Mild: small areas of inflammation on the lung surface (pleura)

What does it look like?

- Areas appear roughened or stuck together
- Affected area may be stuck to chest wall

How is it scored?

The percentage and number of pigs with mild pleuritis are recorded.

- Score 0 = not present
- Score 1 = mild pleuritis present

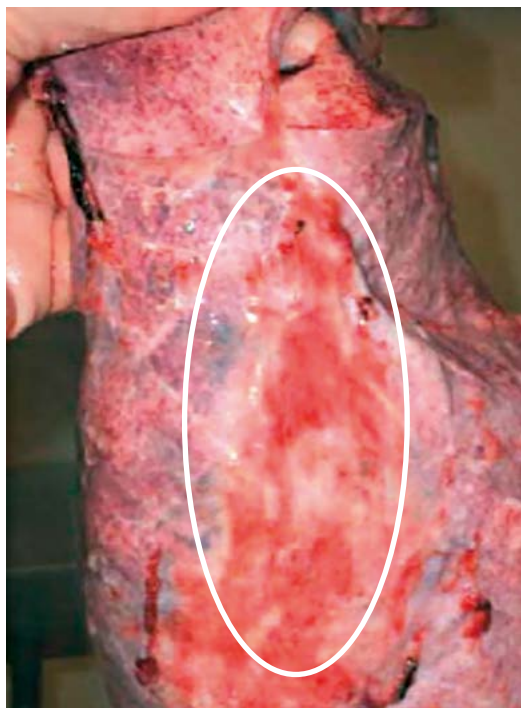


Figure 12. Severe pleuritis

Severe: widespread areas of inflammation of the lung surface

What does it look like?

- As above, but involving whole lobes of the lung

How is it scored?

The percentage and number of pigs with severe pleuritis are recorded.

- Score 2 = severe pleuritis present

Possible causes of pleuritis:

- Many bacteria and viruses can cause pleuritis
- Often a combination of bacteria and viruses

Variation in scores:

- Can be affected by the environment, eg poor ventilation and stocking density
- Pleuritis of indeterminate cause is sometimes seen without other accompanying causes

Extra trimming is required, which may result in penalties.

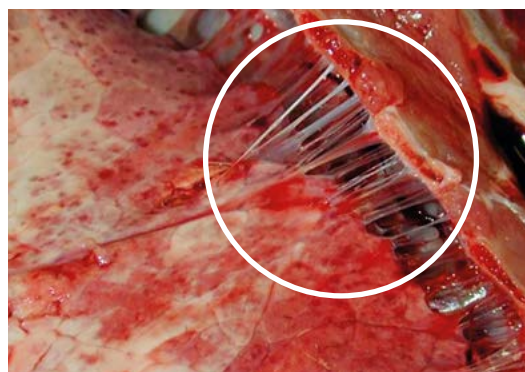


Figure 13. Mild pleuritis with fibrous adhesions between the lungs and the ribs (circled)

Lungs

Abscess

Presence of one or more discrete abscesses.

What does it look like?

- Pocket of pus
- Sealed off from the remainder of the lung tissues in a thick capsule

How is it scored?

The percentage of pigs and the actual number of individuals with the presence of one or more abscesses.

- Score 0 = not present
- Score 1 = present

Possible causes of abscesses:

- Bacterial infection can often be associated with tail biting, but not always

Variation in scores:

- An occasional abscess is not unusual
- High or increasing prevalence need to be investigated with your vet

A cluster of abscesses may suggest an underlying disease problem on farm.



Figure 14. Abscesses

Pyaemia

Bacteria that are spread via the bloodstream to the lungs and elsewhere in the body to cause infection and develop abscesses.

What does it look like?

- Lots of small abscesses throughout the lungs

Note: Excluding a single abscess.

Abscesses may be seen on other areas of the body eg joint ill.

How is it scored?

The percentage of pigs and the actual number of individuals with small, widely distributed abscesses in the lungs.

- Score 0 = not present
- Score 1 = present

Possible causes of pyaemia:

- Wounds caused by tail biting, fighting or by sharp objects in the environment
- Other infections

Variation in scores:

- Increases in aggressive behaviour
- Poor hygiene at injection

Continually monitor the prevalence of tail biting and maintain good hygiene during injections and routine procedures.



Figure 15. Pyaemia

Viral

Viral-like lesions in the lungs.

What does it look like?

- Mottled, tan and red in colour
- Affected areas are firm
- Airways may be filled with blood-tinged fluid

How is it scored?

The percentage of pigs and the actual number of individuals with viral-like lesions.

- Score 0 = not present
- Score 1 = present
- Severe cases may be mentioned in the comment box

Common causes of lesions:

- Porcine reproductive and respiratory syndrome (PRRS)
- Swine influenza
- Porcine circovirus type 2 (PCV2)

Variation in scores:

- Lesions will be seen if infection occurs close to slaughter
- With pigs infected earlier in life, recovery may have occurred and lesions may not be present at slaughter
- A rise in individuals affected may occur in new outbreaks
- Lesions caused by the migration of roundworm larvae can sometimes resemble viral lesions

High or increasing levels should be discussed promptly with your vet

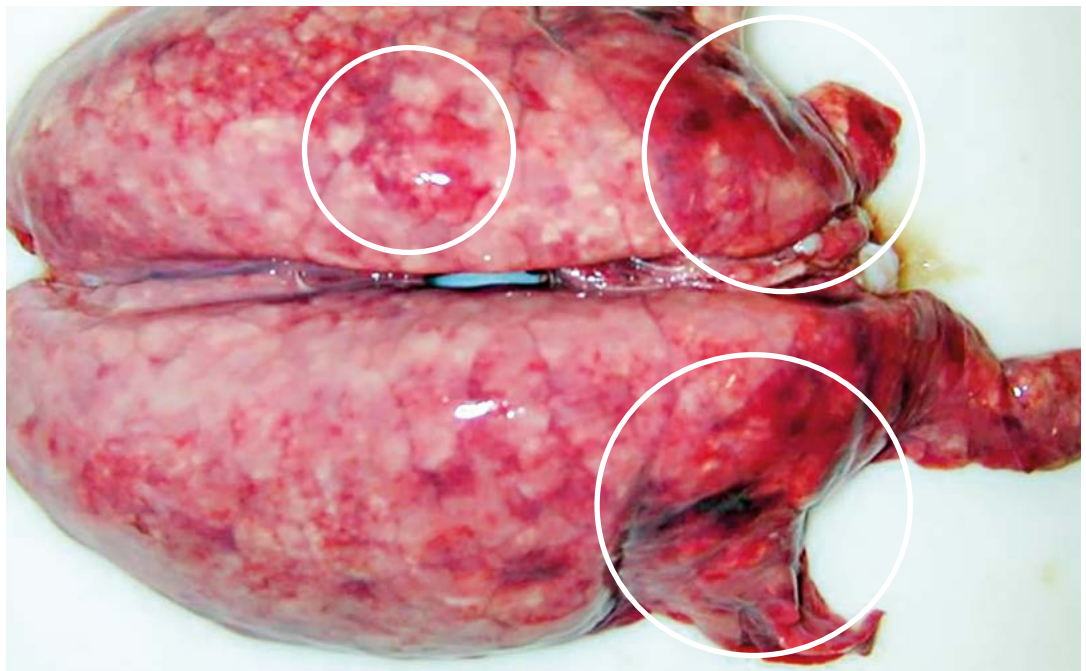


Figure 16. Viral-like lesions in the lungs

Heart

Pericarditis

Inflammation of the sac that encloses the heart (pericardium).

What does it look like?

- Inflamed, thickened or infected sac
- Fluid or pus in the sac

How is it scored?

The percentage and the number of pigs with pericarditis is shown.

- Score 0 = not present
- Score 1 = present

Possible causes of pericarditis:

- Glässers disease
- Other bacterial diseases such as pasteurellosis, salmonellosis, streptococcal and mycoplasmal infections
- Viruses such as PRRS and influenza

Variation in scores:

- Prevalence can rise with increasing numbers of cases of pleuritis, as both conditions can share the same causes

An increase in cases or high levels should be discussed with your vet.

Acute outbreaks of Glassers disease can cause high mortality and high production costs.

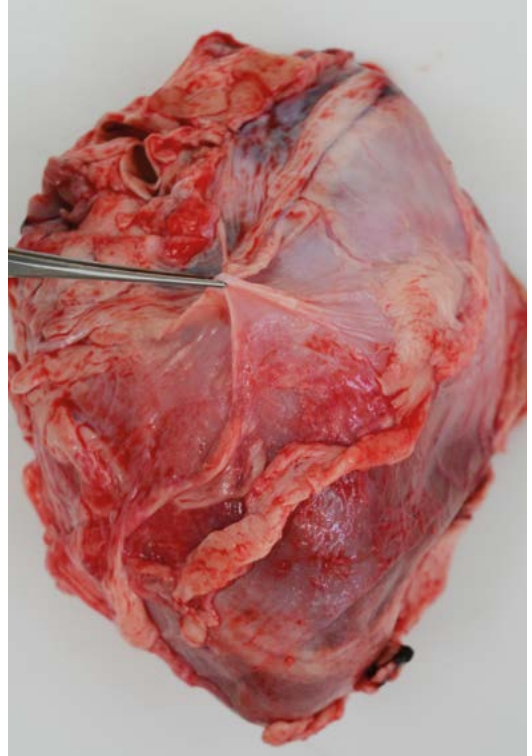


Figure 17. Pericarditis

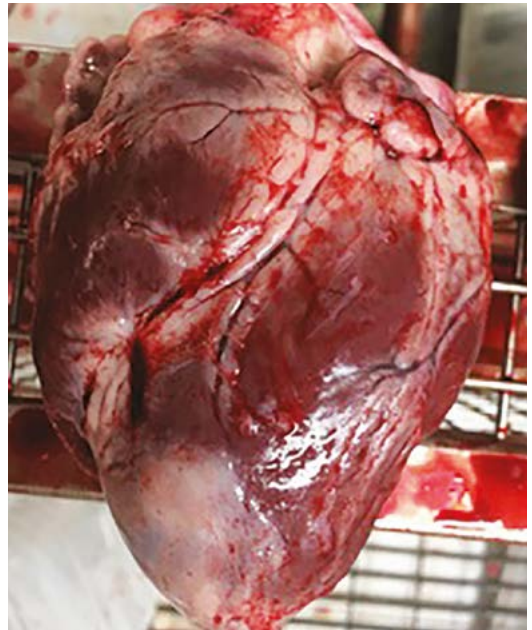


Figure 18. Pericarditis

Liver

Ascaris suum (milk spot)

Milk spot liver is caused by migrating *Ascaris suum* (large roundworms).

What does it look like?

- Splashes of milk or cream on the surface of the liver

How is it scored?

- The percentage and number of pigs infected in the batch are recorded.
- Score 0 = not present
- Score 1 = present

Possible causes:

- Roundworm infection
- Presence at slaughter demonstrates recent infection – lesions disappear after 25 days

Variation in scores:

- Wide fluctuations in numbers can be seen from one batch to another
- The timing of infection varies depending on the number of eggs carried (worm burden)

- The time of year – infectivity of eggs is temperature-related. Roundworm eggs are very persistent in the environment
- The timing of treatment, pig-flow management and the frequency of building cleansing and disinfection
- Lung scores may rise as larvae can migrate through the lungs, causing lesions similar to those of viral lesions
- Contaminated pens are the most common source of infection. Targeted cleansing and disinfection is critical for prevention
- Severe worm infestations are usually associated with the poorest levels of hygiene. This can have a significant effect on growth and feed efficiency

Prevention of environmental contamination is critical.



Figure 19. Milk spot



Figure 20. Milk spot

Peritonitis

Infection and inflammation of the membrane that covers all the organs and surfaces in the abdomen (the peritoneum), including the liver.

What does it look like?

- Inflammation of the liver surface
- Organs and intestines may 'glue' together

How is it scored?

The percentage and number of pigs affected are shown.

- Score 0 = not present
- Score 1 = present

Possible causes of peritonitis:

- Often bacterial infections, eg streptococcal infection and Glässers disease
- Damage from the migration of roundworms may also cause peritonitis

Variation in scores:

- May range from mild inflammation of the liver surface to all organs and intestines sticking together
- Usually individuals (rather than groups) affected

Increased levels may warrant further investigation with your vet



Figure 21. Peritonitis

Hepatic scarring

May result from worms as healed 'milk spots'. Hepatic scarring results from fibrous tissue building up in the liver. The cause of hepatic scarring is unknown.

What does it look like?

- Faint scar-like marks on the surface of the liver

How is it scored?

The percentage and number of pigs with scarring on the surface of the liver are shown.

- Score 0 = not present
- Score 1 = present

Possible causes of hepatic scarring:

- Results from damage to the liver but the cause is often not known

Variation in scores:

- This may indicate a roundworm infection



Figure 22. Hepatic scarring

Damaged tails

How is it scored?

The percentage and number of pigs with damaged tails.

- Score 0 = not present
- Score 1 = present

Possible causes of tail damage:

- The most likely cause is tail biting

Variation in scores:

- Occurrence depends on the environmental conditions in which the pigs are kept, as well as competition for food

- Some abattoirs may keep tail-bitten pigs back to slaughter at the end of the day; this may result in these pigs not being recorded in your batch assessment. Check with your abattoir if you are concerned

Tail-bitten pigs have reduced weight gain and lower carcase weights. There is a relationship between pyaemia and the prevalence of tail biting



Figure 23. Tail bite



Figure 24. Tail bite

AHDB Pork Tail Biting WebHAT

This is an interactive resource providing specific information tailored to your farm which you can use to build your own tail biting risk report.


This uses the information you have provided about the key risks and provides practical suggestions to help reduce these risks on farm.

Welcome to the AHDB Pork Tail Biting WebHAT

The Tail Biting 'WebHAT' (Web based Husbandry Advisory Tool) is a website designed to be an interactive resource providing information about the key risks for tail biting in pigs and practical suggestions to help reduce these risks on farm.


Taking information from evidence based sources and scientific literature, this WebHAT identifies a number of risks associated with tail biting (a key pig behaviour), and can be used to generate a report of prioritised, key tail-biting risks found on a farm and obtain suggestions to address the specific risks identified

[Build A Risk Report](#)




Identifying Early Signs of Tail Biting

Information on the early warning signs of tail biting to assess if there are risks of a tail biting outbreak developing on your farm




Risk Factors of Tail Biting

Browse the risk factors related to tail biting, read suggestions to prevent and reduce these, and build a risk report for specific to your farm



Recording Tail Biting

Information on how recording can be used as a tool to help identify likely causes and risks of tail biting



Information Sources

Information on the development of the WebHAT, identification of these risks, and further reading

Papular dermatitis

Often caused by mange.

What does it look like?

- Small, raised red spots on the skin

How is it scored?

- The average score, the number of pigs affected and the percentage of pigs affected is shown
- Score 0 = not present
- Score 1 = present

Possible causes of papular dermatitis:

- A very common cause is sarcoptic mange. Without investigation presence on farm cannot be confirmed
- Insect bites, harvest mites and larvae
- Urine scald

Variation in scores:

- Scores can vary depending on the time of year, environmental conditions and the type of housing
- If the cause is mange, lesions tend to have a distinct distribution on the body and score may vary depending on the treatment programme in place
- Occasionally, the process of scalding and de-hairing can prevent scoring or accentuate lesions

Discuss mange control with your vet.



Figure 25. Papular dermatitis

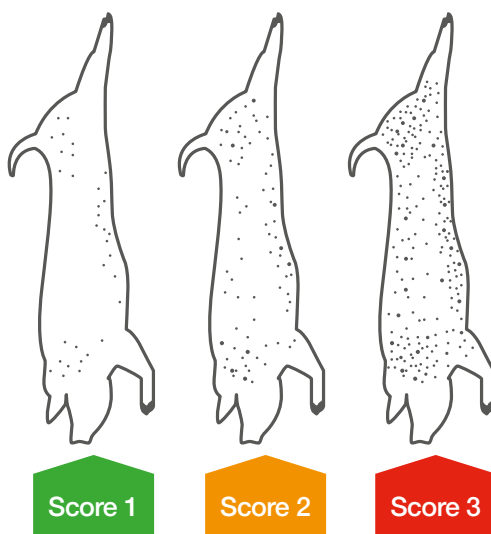


Figure 26. Papular dermatitis scoring example

Further reading

AHDB Pork factsheets:

Regular Worming
Enzootic Pneumonia
Increasing Uniformity of Finished Pigs
Papular Dermatitis
Porcine Respiratory Disease Complex
Ventilation
Pleuritis
Slapmarking Slaughter Pigs

NADIS (National Animal Disease Information Service):

Pig Health – Actinobacillus pleuropneumoniae (APP)

Pig Health – Tail biting

Pig Health – Mange and lice

Pig Health – Glässer's disease

For more information contact:

AHDB Pork Health and Welfare Team: 024 7647 8893

Pork Processing Projects Manager: 024 7647 8977

Email: PHS@ahdb.org.uk

Produced for you by:

AHDB Pork
Stoneleigh Park
Kenilworth
Warwickshire
CV8 2TL

T 024 7669 2051
E comms@ahdb.org.uk
W pork.ahdb.org.uk
🐦 @AHDB_Pork

If you no longer wish to receive this information, please email us on comms@ahdb.org.uk

While the Agriculture and Horticulture Development Board seeks to ensure that the information contained within this document is accurate at the time of printing, no warranty is given in respect thereof and, to the maximum extent permitted by law, the Agriculture and Horticulture Development Board accepts no liability for loss, damage or injury howsoever caused (including that caused by negligence) or suffered directly or indirectly in relation to information and opinions contained in or omitted from this document.

© Agriculture and Horticulture Development Board 2018.
All rights reserved.

