



Improving detection of pneumonia with lung scanning

JANUARY 2023

Impact of calf respiratory disease

We all dread the day walking into the calf shed to find sick calves which are off their feed and showing signs of pneumonia.

However, clinical cases are usually just the tip of the iceberg. Up to two thirds of calves can have lung lesions without showing any clinical signs. These undetected cases have a massive financial impact in both dairy and beef calves:

- **202g** – this is the reduction in weight gain, per day, of beef calves with subclinical lung damage from birth to slaughter
- A recent study found that finishing time can be delayed by **33-59 days** for cattle without clinical signs but simply housed with cattle with pneumonia
- Cost per case: minimum of **£43.25** per sick calf with an added cost of **£29.58** per calf for the rest of the in- contact group

Unfortunately, most cases of pneumonia are sub-clinical and go unnoticed. This not only impacts the calf pre-weaning but has major implications on future productivity such as:

- 4% reduction in 1st lactation yield, 8% in 2nd lactation
- Delayed age at first calving by 2 weeks

Lung scanning- how does it work?

Ultrasound scanners which are used for routine fertility work can be used to capture images of the lungs.

This is a non-invasive technique, as demonstrated by Joe R above. The area is wetted with surgical spirit then the probe is used to scan between each rib space.



Meetings coming up...



Medicine Handling Course
Thursday 26th January, 11am - 1pm
at the practice

Johnes CPD Monday 23rd January,
7pm - on Zoom



Beef Benchmarking Evening
at The Ship Inn, Luckington,
Wednesday 25th January at 7pm

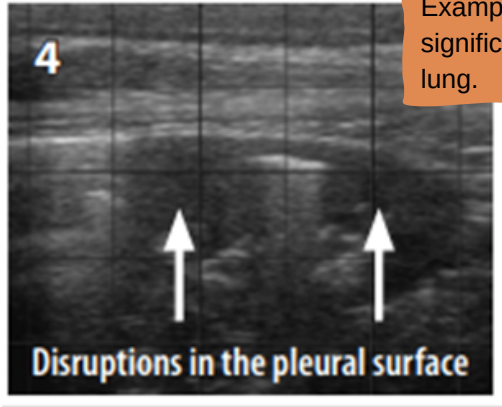
As always if you are interested in attending one of our meetings - give the office a ring

With these images each calf can be assigned a score which reflects the level of disease.

Lung Consolidation Score (LCS)

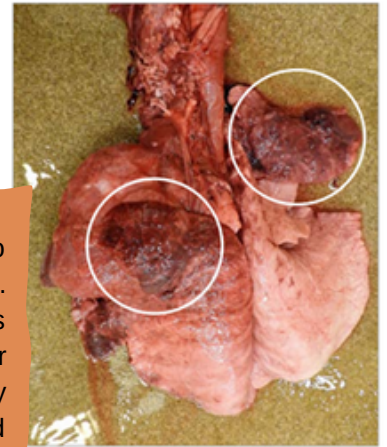
- 1 = no consolidation
- 2 = comet tails on the pleural surface
- 3 = one location of consolidation ≥ 1 cm but < 6 cm
- 4 = consolidation ≥ 6 cm or more than one location of consolidation

This technique provides a more objective approach to detect early cases of respiratory disease. Using observation only has its limitations due to the variability in clinical signs shown and the ability of individuals to detect early signs of disease.



Example of a score 4 calf with significant structural changes in the lung.

The post mortem revealed two large areas of consolidation. Once lung tissue becomes consolidated it is no longer functional and will significantly limit a calf's ability to grow and impact its future productivity.



How can lung scanning be implemented?

There are several ways we can implement this technique depending on the priorities of each farm. This includes:

- Scanning heifers pre-service - those with lung damage can be sold/fattened instead
- Scanning purchased calves upon arrival on rearing units - those with lesions can be isolated and treated straight away. Problematic source farms can also be identified and avoided in future
- Identification of animals with lesions for diagnostic sampling during an outbreak of pneumonia
- Identification of worst facilities on farm and high risk periods which can help prioritise which management changes to make first
- Monitoring tool to assess if management changes have been effective e.g. vaccination
- Prognostic indicator for clinical cases - is recovery likely and is treatment economic

Considering the bigger picture

Pneumonia continues to be one of the biggest diseases affecting the UK cattle industry due to its complex and multifactorial nature.

Lung scanning is just one tool we can utilise to help reduce disease levels, improve calf health and farm in a more sustainable manner.

We have recently launched a new initiative focusing on youngstock health. This includes a comprehensive vet visit to assess colostrum management, housing, nutrition, infection pressure as well as finding out what goals each individual farm would like to achieve.

If you would like any further information, please do not hesitate to contact us.



Happy New Year!
Zoe



VET TECH - UPDATE

Remember our vet Techs Rosie, Zoe and Toby are fully trained to carry out disbuds, freezbranding, calf weigh banding and intra nasal vaccinations



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T: 01666 823035 Option "1" for visits or enquiries, "2" for medicines or shop, "3" for TB testing