

# Developing skill in on-farm autopsies

## Case study: Longford Red Meat Group, Tasmania

### Improving lamb survival on leguminous pasture

The 'Improving lamb survival on leguminous pasture' Producer Demonstration Site (PDS) is a four-year project driven by the Longford Red Meat Group in Tasmania. This project is demonstrating four different feedbase and grazing management strategies and their link to lamb red gut cases. The project aims to identify strategies to reduce red gut incidence, minimise lamb mortalities and improve farm productivity.

A key objective of this PDS is to upskill host producers to determine lamb cause-of-death by conducting their own on-farm autopsies throughout the project. During autopsies, they will identify cases of red gut and other common lamb mortality causes.

### Benefits of on-farm autopsies

On-farm autopsies are fast and cost effective to help determine lamb cause of death. Autopsies on fresh carcasses can assist producers to identify underlying health conditions or concerns for individual animals or groups of animals before further cases occur (depending on the cause). When a farmer is trained to conduct autopsies, it provides an opportunity to gather information about why an animal may have been unwell and subsequently died.

If competent and confident, farmers are saving time and fees for vet call outs by conducting autopsies themselves on-farm. Alternatively, the producer could be guided on phone by a vet and can relay what they are observing when they conduct the autopsy, or send photos in real time. This allows the vet to provide prompt advice and/or

recommendations for further samples for analysis, without travel time to the farm.

### Identifying red gut through autopsies

Sudden Death Syndrome (SDS) can be attributed to numerous diseases/conditions where a lamb dies suddenly, with minimal or no obvious external symptoms. This can include red gut, bloat, pulpy kidney, nitrate toxicity, pneumonia, and salmonellosis. These conditions can often be diagnosed if an autopsy is conducted promptly. This makes autopsies a valuable tool for producers. They can understand the cause of death to best address the underlying concern as different conditions may have different treatment and prevention methods.

A dark red, displaced intestine is symptomatic of red gut. The condition is often associated with a lack of dietary fibre. Potential management techniques include diversifying the growing lambs' diet by increasing fibre levels or roughage in mixed feed types.



Image 1 Sheep post-mortem of red gut case with dark red intestines.

## PDS autopsy workshop

A workshop on a PDS farm in August 2024 detailed the process of conducting an autopsy on-farm, including collecting and submitting samples for analysis.

Dr Bruce Jackson, the project vet, facilitated the workshop with assistance from Pinion Advisory and Dr Andrew Thompson from the Department of Natural Resources and Environment (NRE) Tasmanian Animal Health Laboratories. Attending producers stepped through the autopsy and sample collection process. A handbook including the step-by-step process, photos and tips was developed for producers to reference.

## PDS autopsies

The first year of the 'Improving lamb survival on leguminous pasture' saw host producers conducting their first on-farm autopsies to determine possible causes of death. Producers were looking out for key diseases and conditions such as red gut, bloat, pulpy kidney, and pneumonia. Additionally, to ensure a high standard of animal welfare during the PDS, producers were experienced and competent to identify other health concerns such as lameness, flystrike, injury or unusual behavior changes.

Each host producer received their own project kit with all the autopsy, sampling, and biosecurity equipment required to perform safe autopsies. Using a farm diary, host producers recorded observations and the collection of any samples to be sent for further testing. Producers received support from Dr Bruce Jackson where required, with photos being a useful way of him checking what producers were observing.

"Producers in this project have proven to be very good at conducting on-farm necropsies (autopsies) and have sent high-quality photographs which led to accurate diagnoses," Dr Jackson said. "It is important that producers work closely with veterinarians to rule-in or rule-out a particular disease. Necropsying a series of animals gives a much better measure of the true situation."

After their first season of performing their own on-farm autopsies, host producers reported they found the process a quick and easy technique, particularly for identifying red gut.

Host producer Sam Lyne (Riccarton, Campbell Town) said that he "found the autopsies quicker and easier to do than expected. It was straightforward to identify red gut and didn't take up much time".

Host producer Andrew Archer (Chester, Westwood) also found the process straightforward, saying "it takes about one minute to identify red gut, and three minutes for pulpy kidney which made it a quick process."

## Advice for producers

If you are conducting your own on-farm autopsies, it's important you are first upskilled in the process by an experienced veterinarian. When conducting autopsies, you must have the right equipment and follow work, health and safety, and biosecurity protocols to keep you and others safe during the process. If you are interested in learning more, contact your local veterinarian. If you are a Tasmanian local, contact the project team to express your interest (contact details below).

## How to get involved

To be across dates of upcoming field days, workshops or to stay updated with project publications, please contact Pinion Advisory (details below).

View the project page for this MLA Producer Demonstration Site: [mla.com.au/improving-lamb-survival-on-leguminous-pasture-pds](https://mla.com.au/improving-lamb-survival-on-leguminous-pasture-pds)

*Animal Ethics Committee project ID: AEC 16/2023-24, Human Ethics project ID: 30689. Any concerns or queries regarding project ethics should quote the project ID number and be directed to:*

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