

Using abattoir condemnations to make flock improvements

By Emily Gascoigne,
Synergy Farm
Health



Abattoir condemnations can be hugely costly for flocks, be it the whole carcass or just a part of it. The cause of condemnations often results in lost flock performance on the farm too, so using abattoir data to inform and adapt existing practices, with particular reference to parasite management, is a positive thing to do.

The cost of disposal may not always be immediately apparent to you as a producer (with some exceptions, where huge costs are incurred) but the overall financial implication for the industry as a whole means we must reduce losses and make lamb production more efficient and sustainable going forward.

Meat inspections

Slaughterhouse legislation means abattoirs have to carry out ante-mortem inspection of livestock and post-mortem inspection of carcasses, to declare meat and offal fit for human consumption. They are also required to return this information to the submitting producers. In its most basic form, abattoir feedback will list animal weights, carcass grades and number of animals submitted, along with any rejections. With the ever increasing use of electronic identification recognition, this feedback is increasingly accurate and available and more processors are linking it to individual UK numbers. There are still some challenges with returning the



While regularly treating farm dogs is essential in preventing tapeworms, also advise dog walkers of their role in protecting sheep.

Understanding abattoir feedback terminology

Term	Rejection reason	Responsible parasite
Liver cyst	<i>Cysticercus tenuicollis</i>	<i>Taenia hydatigena</i>
Muscle cyst	<i>Cysticercus ovis</i>	<i>Taenia ovis</i>
Liver lesion	Liver fluke	<i>Fasciola hepatica</i>
Lung lesion	Pneumonia/pleurisy of the pluck	
Local abscess	Injection site abscess	
Local bruising	Bruising from impact or wool pull	

information to the relevant producer (for example, store finishers may not be the source of historic pneumonia infections) but things are definitely improving. Rearer-finishers can certainly apply the data returned to their business, and finishing units can apply active disease observations to their units.

As a vet in practice, my most common phone calls on abattoir feedback are related to understanding the terminology used – see table for common causes of rejection and the terms frequently used.

The *Taenia hydatigena* tapeworm is the most common cause of liver rejection in the UK, with AHDB figures showing it was responsible for 742,000 rejections in 2012 compared to 582,000 due to fasciola lesions (liver fluke) during the same period.

Parasite lifecycle

The adult stage of this tapeworm is found in the small intestine of dogs. Eggs are shed in the faeces and picked up by grazing sheep. The parasite migrates via the blood stream from the guts to the peritoneum and embeds in the liver. Here small cysts are formed, which are recognisable to the naked eye on meat inspection and are known as *Cysticercus tenuicollis*. The migration is unlikely to cause huge production losses unless it occurs in large numbers, in which case liver disease is observed through poor lamb growth.

Dog infection occurs as a consequence of eating infected animals, either through raw meat feed or consumption of fallen stock. Animals do not establish immunity to *T. hydatigena* and lesions are frequently observed in animals of all ages.

Treatment of this condition in sheep is not effective or feasible, so preventing infection should be a priority. Top tips include prompt disposal of fallen stock, not feeding offal to farm dogs, regular worming of farm dogs with a praziquantel-based product every six weeks to kill the

adult tapeworm, and clear sign posting of footpaths to warn dog walkers of the role they play.

Taenia ovis is another dog tapeworm and utilises the same lifecycle. Because of the dispersion of the cyst via the bloodstream, we often see *T. ovis* cysts in some of the biggest muscle systems in the body, such as the main muscles of the leg, the heart, diaphragm and masseter muscle, as well as seeing it occasionally generalised throughout the carcass.

Condemnations

Generalised infection leads to whole carcass rejection, which has a huge impact for flocks as the producer has to absorb the cost. AHDB recorded 66,500 lamb carcasses rejected in 2012 (0.78% of slaughtered sheep). As with *T. hydatigena*, *T. ovis* will not cause disease in people but will affect meat quality and visual appeal of the final product.

Again, control is more feasible by preventing dog infections, with regular worming of farm dogs, avoiding grazing of footpaths with lambs destined for slaughter and prompt management of fallen stock.

Most flocks are familiar with liver fluke when receiving abattoir feedback but, in my experience, few are utilising the data to its full effect. Meat inspection



To avoid condemnation from injection site abscesses, inject in the right place and use an automatic needle sanitisation system on multi-animal guns.

is essentially a comprehensive post mortem examination on otherwise healthy animals, so feedback is a useful monitoring tool as part of a fluke management plan developed with your SQP and veterinary team.

While the cost of liver disposal may be minor and incurred by the processor, there are substantial costs back on the farm with increased mortality and decreased daily liveweight gains. Prompt identification of increasing liver fluke burdens can enable flocks to reassess their management on farm and consider if treatment is needed, grazing of which pastures is leading to infection of lambs at what time of year and, at its most simple level, if there is liver fluke on the farm.

Warning system

For farms with a particularly high fluke challenge, lambs finished off the ewe may be a useful early season indicator of fluke burden for the year ahead – although take care with this, as in a particularly wet year the high risk period of acute fluke might actually be earlier than those first lambs are finished. Other important tools for early season diagnostics are the NADIS fluke forecast at www.nadis.org.uk, knowledge of the grazing, a history of fluke diagnosis on farm and faecal and serological testing.

Injection site abscesses are typically caused by the introduction of

NSA update

Abattoir feedback is an area where NSA is particularly active, pushing for a better system for producers. While the Food Standards Agency (FSA) is legally obliged to have a collection and communication of inspection results (CCIR) system, the current list of hundreds of diseases is not practical and, therefore, not widely used. NSA has had input into a standard list of common post-mortem observations that all abattoirs would work to in a consistent fashion in order to provide feedback to individual producers and enable industry trends to be captured.

AHDB is already supporting a trial using this list and the next step is a wider consultation to seek the views of the whole industry. There has been suggestion that meat hygiene inspectors will not support the change, but NSA feels that an improved system is essential and that abattoir training and technology must be put in place to enable progress.

bacteria via needles when vaccinating or administering other medications. Ideally the rump muscles should be avoided for intramuscular injections, and subcutaneous injections should preferentially be given under the skin of the neck. Ideally an automatic needle sanitisation system, such as that offered

by Sterimatic, should be used for all injections when a multi-animal gun is used; new needles and syringes should be used for individual animal treatments. These abscesses often result in large regions of trimming, often in the most valuable region of the carcass.

Bruising is typically the result of rough handling at moving. Handling or pulling of the fleece on sheep should be avoided, especially given that it potentially causes pain as well as damage. Stress is known to reduce carcass eating quality and animals should be handled as quietly and calmly as possible, in well maintained handling facilities.

Further information available from kill sheets includes grades of animals (conformation and fat coverage) and weights of animals. Average daily liveweight gain can be evaluated for groups of lambs. Although it may be skewed by multiple factors throughout the year, such as creep feeding of a mob, it is useful as a general indicator of lamb growth.

Carcass grading may also prove useful when multiple tups, breeds or management systems are used on farm to compare inputs and carcass results. Ideally, more than 75% of carcasses sent finished from the flock should be achieving the target grade (which is R3L unless specified otherwise by the buyer).