

How to control and treat sheep scab in your flock

Sheep scab is estimated to cost the UK sheep industry £8m/year with 9% of sheep farmers experiencing at least one case every year. Vet **Lee-Anne Oliver**, from XL Vets' Scott Mitchell Associates, looks at what can be done to prevent it becoming a problem this winter

What is sheep scab?

* Sheep scab is caused by the mite *Psoroptes ovis* and represents a significant risk to the health, welfare and productivity of sheep flocks.

What does it look like?

* The disease is more commonly seen in the winter months. First signs are of sheep rubbing themselves against fence posts and scratching their flanks. This leads to loss of wool and a ragged fleece.

The damaged underlying skin oozes serum, giving the fleece a moist, dirty-yellow appearance. Prolonged infection results in large areas of crusting and fleece loss.

Studies suggest 60% of a group can be affected before these clinical signs appear.

How do sheep become infected?

* The mite completes its whole lifecycle on the sheep but mites can survive off the sheep for up to 17 days; this survival off the host is maximised in cold, damp weather.

Sheep become infected through direct contact with infected sheep, contaminated trailers or handling pens. Some sheep may not show clinical signs but harbour the mite in areas such as their ear canal or groin – these sheep then serve as a potential source of infection for other sheep.

What is the legislation regarding sheep scab?

* The Sheep Scab (Scotland) Order 2010 classifies sheep scab as a notifiable disease and it is compulsory

for farmers and vets to notify the authorities of suspected cases. Veterinary investigation is subsidised in these cases.

Sheep scab is no longer notifiable in England and Wales, although the Sheep Scab Order (1997) makes it an offense to move infected animals or fail to treat those visibly infected.

How can you diagnose sheep scab?

* All suspicious cases of wool loss and itching should be investigated by a vet.

When investigating itchy sheep, the two most common causes are lice or scab mite, or both.

Often lice can be seen with the naked eye, but skin scrapes from the edge of the affected areas examined under a microscope are required for detection of the scab mite.

It is estimated that the skin scrape will only detect sheep scab in one out of five cases during the early stages of disease, when sheep do not seem to be itchy.

Recently a blood test has become available that detects antibodies specific to the scab mite and is capable of detecting antibodies from two to four weeks after infection.

The blood test can be used to confirm infection in a flock at an early stage of disease before wool loss and rubbing becomes apparent. It can be used to prove freedom from infection in eradication programmes and in quarantine screening.

Antibodies to sheep scab can be detected for up to nine months after infection, even if treatment has been effective, so this may limit how useful the antibody test is for assessing response to treatment.

Further research is in progress to develop a test that can be used on farm to detect sheep scab through measuring proteins associated with inflammation. Inflammatory proteins are more responsive to the change in infection and can be used

to ensure treatments have worked as expected.

How can you treat and control scab?

* When treating and controlling sheep scab there are a few key points to consider:

* The mite can last up to 17 days on fences and in pens, trailers and buildings.

* It only takes one egg-laying female mite to cause an infestation.

* The control of sheep scab is highly reliant on whole-group treatments with injectable Macrocyclic lactones (ML); Moxidectin, Doramectin and Ivermectin. There is concern that the blanket use of persistent injectable ML for scab control allows for selection of anthelmintic resistance.

* With new diagnostic tests being developed, it opens up opportunities for scab control and the possibility of decreasing the use of plunge dips and ML anthelmintics.

* The only treatments that exceed the scab survival period of 17 days are diazinon sheep dip and mox-

idectin injection. They persist for long enough that treated sheep can return back to "dirty" fields and buildings after treatment without becoming reinfected.

* There are two concentrations of moxidectin products available. To treat scab, the 1% preparation requires two injections 10 days apart. The 2% preparation kills

scab for up to 60 days from a single injection.

* Two injections of ivermectin seven days apart or a single injection of doramectin can be used to treat sheep scab but they are not persistent for greater than 17 days so sheep must be moved to "clean" pastures or buildings where there have been no infected animals in

the preceding 17 days.

* Ectoparasiticide pour-ons and shower dipping are not effective for sheep scab treatment or control.

The data sheet should be adhered to when using any products and withdrawal periods observed.



Sheep can harbour the mite in their groins and ear canals.

By applying these basic rules, sheep scab can be easily treated on an individual farm. What is often required is neighbours to work together to treat all the sheep in a geographical area to prevent re-emergence of infection.

Is biosecurity necessary to stop sheep scab spreading?

* Purchased sheep or animals returning from grazing also pose a risk. It is recommended they are treated on arrival. Where injectable endectocides are administered it can take 14 days for the mites to be killed (variable depending on the product) therefore incoming sheep should remain in isolation for at least 14 days post-treatment.

Straying sheep, shared handling facilities, shearers' trailers and scanning races all pose a risk, and efforts should be made to minimise the risk of introducing the problem.

* Get more information on controlling and treating sheep scab by reading *Farmers Weekly's* scab academy at www.fwi.co.uk/scab



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Vet Lee-Anne Oliver says 60% of a flock can be infected with sheep scab before the clinical signs even appear.