

# INCREASE IN SHEEP SCAB CASES DECREASES TREATMENT OPTIONS

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**Graham Baird** looks at how withdrawal of a group of dips has left few choices for farmers facing outbreaks of this disease and advises on prevention methods

**SHEEP scab due to infection with the *Psoroptes ovis* mite is the most important contagious disease of sheep in the UK.**

In 2009, the last year for which published figures are available, 134 outbreaks of sheep scab were recorded in Britain by the Animal Health and Veterinary Laboratories Agency and Scottish Agricultural College. However, it is generally accepted this figure significantly underestimates national incidence of the condition.

Many scab outbreaks will be diagnosed by local veterinary practitioners without reference to a veterinary investigation centre – and are therefore not included in Veterinary Investigation Surveillance Report (VIDA) records. Other cases will be treated by farmers, with no veterinary input, who are suspicious their flock is affected.

While no definitive means exist of knowing for sure, many practitioners think scab prevalence is not lessening and that in some regions the condition is becoming more important.

Another look at the figures from 2009 confirms that scab predominantly remains an autumn and winter disease ( [Figure 1](#) ), with January seeing the peak in diagnoses.

However, a significant number of outbreaks do still occur in the spring and summer. Often these cases involve juvenile sheep, whose longer fleeces protect the mites from dessication, or adults that have either escaped shearing or been poorly clipped.

## Scab revision

The majority of sheep scab spread is likely to occur directly from close animal-to-animal contact. This means the most important risk factor for new outbreaks is the introduction of stock to the holding ( [Figure 2](#) ). This may be a planned introduction – as in the purchase of sheep or return of away-grazed animals – or unplanned, such as contact made with a neighbouring flock on shared grazings or following stock breakouts.

The ability of the *P ovis* mites to survive away from the parasitised animal for up to 16 days means that indirect transmission via inanimate vectors is another important mode of spread. Because of this, any fence, gatepost or tree that has been used for scratching can be a source of infection for the next animal to come along. Likewise, the interior of vehicles used to transport infected sheep may serve the same purpose. Even farm workers' clothing or equipment can act as a mechanical vector of infection.

While a number of conditions may cause pruritus in sheep, scab should be placed at the top of the differential list until it can be confidently ruled out.

Although a clinical history and skin examination can often suggest a scab diagnosis, confirmation should be sought through the examination of a skin scrape taken from the margins of active lesions.

In Scotland, suspicion of sheep scab is again notifiable, and the divisional veterinary manager (DVM) should be informed of concerns at the earliest opportunity.

## Treatment dilemma

As the prevalence of sheep scab in this country has increased, so the options for therapy and prevention have decreased.

Most significantly, an entire class of therapeutic products was removed from the market last year when the manufacturers of high-cis cypermethrin-containing dips voluntarily took them off the shelves. The effect of this action has been to leave essentially only two other options for farmers – plunge dipping in solutions containing the organophosphate chemical, diazinon, or the use of injectable macrocyclic lactones (the avermectins and milbemycins).

[Table 1](#) lays out the therapeutic options currently available to farmers. All other types of treatment, including the use of pour-ons, and equipment that showers or jets dip solution on to affected sheep,

are ineffective for the treatment and prevention of scab.

## Conditions associated with pruritus in sheep

- Sheep scab (due to *P ovis*) causes intense irritation and itchiness, leading to rubbing and biting of the fleece. Other signs in affected sheep may include anorexia and loss of condition, general restlessness and foot stamping. Inspection of the fleece will often show moist yellow crusts and scab, and signs of marked wool break.
- Chorioptic mange can also cause intense irritation, but tends to be restricted to the legs in sheep.
- Lice can cause some pruritus in sheep, especially during winter months. The parasites should be evident to the naked eye on careful inspection of affected areas. Other ectoparasites, such as ticks or keds, may rarely cause mild irritation.
- Myiasis (fly strike) can cause extreme skin irritation during the summer months, the cause of which should be easily diagnosed on closer inspection.
- Dermatophilosis (mycotic dermatitis [lumpy wool], due to *Dermatophilus congolensis*) infection can cause skin scabbing, fleece matting and areas of dermatitis with irritation.
- Scrapie cases can exhibit frantic pruritus in association with a loss of condition and other neurological signs. If this notifiable disease is suspected, the local DVM should be informed immediately.

## Quarantine treatments

Dealing effectively with the risks inherent in introducing sheep to the flock is now a cornerstone of scab control. This extends not only to bought-in animals, but also those entering from winter or summer grazings, or those returning unsold from market.

The safest assumption is that all sheep arriving within the flock are potentially infected. They should, therefore, be treated by dipping or a suitable injection course. Once this has been completed, the animals should then be placed in effective quarantine for at least two weeks after the end of treatment before they enter the main flock.