



Sheep Scab Initiative

Bulletin #7

Sheep Scab in Northern Ireland – Flock economics

The level of sheep scab infection in NI is concerning: it is one of the most important diseases affecting the NI sheep farming industry, because of its effects on animal welfare and its economic impact.

Costs

There is little data available on the costs of sheep scab in NI or the ROI, however a study in GB in 2005¹ reckoned costs to be £8.3 million per year, including £0.8 million in reduced animal performance. Sheep scab is a costly disease for several reasons:

- Reduced productivity due to reduced lamb birthweights, reduced growth rates, effect on body condition of ewes, fertility issues, wool loss and reduced quality of pelt.
- Cost of treatment of cases of active infection
- Cost of dips to prevent scab infection
- Cost of labour and losses.

Preventative treatments

An economic model produced in 2017² found that it was only cost-effective to use prophylactic (ie preventative) treatments for sheep scab when the risk of infection was high (such as on hill farms using common grazing) and when treatment costs were low. Organophosphate (OP) dipping made economic sense (assuming that dipping infrastructure was already in place), as the use of OPs is less expensive than injectable Macrocytic Lactones for both hill and lowland flocks. In all other cases, prophylaxis was not cost-effective compared to treatment in response to a diagnosis of sheep scab.

It is recognised that the benefits of prophylaxis are enhanced if neighbours also treat their flocks prophylactically.

Benefits analysis

For the non-infected flock, the owner carrying out a costs-benefit analysis will weigh up the cost of prophylactic treatment and additional biosecurity measures (such as use of the ELISA blood test on incoming quarantined sheep) with the potential production losses that will occur if sheep scab is introduced plus the cost of treatment. This calculation will be influenced by the knowledge of sheep scab in the area (the presence of scab in neighbouring upland flocks is estimated to increase the chances of infection 10-fold³) and whether neighbouring flocks are given preventative treatments.

Future developments

Given that research and development costs are high for other alternative products, there are not likely to be many additional options for pharmaceuticals that will assist control in the future. Work to develop alternative control strategies, such as a vaccine, continues but is likely to take several years.

¹ Nieuwohof and Bishop, 2005

² Nixon, 2017

³ Rose and Wall, 2012