



## Sheep Scab in Northern Ireland

### The parasite and its life cycle

Sheep scab is a highly contagious disease caused by parasites (*Psoroptes ovis*) that live on the surface of the body. It is a notifiable disease and is one of the most important diseases affecting the NI sheep farming industry, because of its effects on animal welfare and the economic losses that can result.

#### Prevalence

While the exact prevalence of the disease has not been assessed, best estimates are based on a postal survey that was carried out in GB in 2003/2004 which found that overall 9% of sheep farmers reported having at least one outbreak of scab in their flocks<sup>1</sup>. The annual cost of sheep scab for Great Britain was estimated to be £8.3 million in 2005<sup>2</sup>, including £0.8 million in reduced animal performance.

#### The parasite and its location

*Psoroptes ovis* is a biting and chewing mite. The parasite's distribution on an animal varies depending on the time of year. During the winter, it can spread over the body as the fleece gets thicker, from reservoir areas such as the axilla, groin or ear canal. At times, some sheep may appear to be healthy and free from scab but will actually be harbouring the mite in these sites. If these animals are introduced to healthy flocks, outbreaks of the disease may occur during the following winter.

While the disease may be seen all year round, most outbreaks occur from October to March and are particularly seen in housed sheep (females are thought to lay more eggs during this time).

#### Life Cycle

- The life span of the mites is 4-6 weeks.
- Eggs are laid at edge of scabs and hatch into larvae in 2-3 days, then go through larval stages.
- Between the various stages of development, there is an inactive phase during which the developing mites do not feed and are not susceptible to some anti-parasitic treatments<sup>3</sup>.
- Female adults moult again and start to lay eggs.
- Development from an egg to an egg-laying stage takes 10-12 days.
- The female mite lays a few eggs every 3-4 days so lays about 90 eggs in her lifetime.
- The mite population can double every 6 days during peak growth.
- If sheep have not been previously exposed, when they are infected there can be a sub-clinical period of approximately 3 weeks before clinical signs may be seen.

<sup>1</sup> Bisdorff et al, 2006

<sup>2</sup> Nieuwohof and Bishop, 2005

<sup>3</sup> Lewis, 1997