

NADIS Health Bulletin



Knowledge transfer to farmers

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Health Quiz

Common Ectoparasite Infestations (excluding sheep scab) in Sheep

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While sheep scab is the most important ovine skin infestation, farmers must also be aware of the other ectoparasite infestations that can affect their sheep causing financial loss and welfare concerns. Control of all ectoparasites infestations can largely be achieved by strategic treatments and strict biosecurity although these principles of disease control appear to have been largely forgotten in the 15 years since the cessation of compulsory plunge dipping. A control programme must be included in all veterinary flock health programmes and implemented before the major risk periods.



Fig 1: Disturbed grazing caused by headflies on skin lesions on the sheep's head.



Fig 2: Sheep often adopt a submissive posture in sternal recumbency with the neck extended and the head held on the ground when disturbed by flies.



Fig 3: The impact of headfly worry and interrupted grazing is clearly shown by comparing the affected sheep in the foreground with another sheep managed in the same group.



Fig 4: Housing is essential for sheep with large skin lesions to allow time for complete healing.

Headfly

In the UK, headfly can present a major problem during the summer months. Grazing patterns are disturbed (Fig 1) and affected sheep often isolate themselves and remain in shade where available. They may stand with the head held lowered with frequent head shaking and ear movements. Alternatively, sheep adopt a submissive posture in sternal recumbency with the neck extended and

the head held on the ground. Kicking at the head often greatly exacerbates damage caused by headflies and such action may also traumatise the skin of the neck and ears (Fig 2). The impact of headfly worry and interrupted grazing is clearly shown in Fig 3 by comparing the affected sheep in the foreground with another sheep managed in the same group. Fleece quality is adversely affected and the loss of body condition (Fig 3) will reduce ovulation rate and subsequent litter size costing the farmer money.

Topical emollients and antibiotic preparations are not usually necessary and skin wounds heal well provided the flies are denied access to these areas. Housing is essential for sheep with large skin lesions to allow time for complete healing (Figs 4-5).

Pour-on fly control preparations, such as high *cis* cypermethrin or deltamethrin, must be applied before the anticipated headfly season and especially to horned sheep with re-application as directed by the manufacturer's instructions.

Cutaneous myiasis (Blowly strike, maggots)

Blowfly lesions may range from one centimetre diameter areas of skin hyperaemia with a small number of maggots to extensive areas of traumatised/devitalised skin causing death of the sheep.

Adults flies are attracted to areas of faecal staining surrounding the perineum; and less commonly virulent footrot lesions with exposed corium/exuberant granulation tissue, dermatophilosis lesions on the skin, and urine scalding around the prepuce. In severe infestations the sheep are depressed and isolated from the flock. Large numbers of adult flies are seen on the fleece with maggots on the blackened skin once the surrounding fleece has been lifted clear. There is an associated putrid smell.

Affected sheep can be treated by plunge dipping using a synthetic pyrethroid or organophosphate preparation but it is more usual to treat individual infested sheep with dip wash applied directly to the struck area after first clipping away overlying wool.

Before preventive measures using various chemicals are considered, much can be done to reduce the attraction of blowflies for example a grazing programme to prevent the massive build up of infective helminth larvae on permanent pasture during July and August (mid-summer rise) reduces diarrhoea caused by high parasite burdens. Where faecal staining of the perineum occurs this wool must be removed ("dagging" or "crutching", Fig 6). In adult sheep removal of the fleece and any faecal contamination by shearing during late May/June in the UK removes this attraction well before the peak of the blowfly season.

Dimpylate (diazinon) and propetamphos are effective against blowfly strike. These compounds are strongly lipophilic and replenishment of dips is important to maintain effective concentrations within the bath. The synthetic pyrethroids, including high *cis* cypermethrin, have a much higher human safety margin than the organophosphorus compounds and persist in the fleece for up to eight weeks.



Fig 5: Housing is essential for sheep with large skin lesions to allow time for complete healing.



Fig 6: Wool must be removed when faecal staining of the perineum occurs.



Fig 7: Lice may cause disrupted feeding patterns and fleece damage/loss.

While topical application of high *cis* cypermethrin pour-on preparations provides protection against fly strike, these preparations persist for only 6 to 8 weeks at the site of application and require re-application in most situations. The insect growth regulator, cyromazine, applied before the risk period is very effective against blowfly strike for up



Fig 8: Fleece loss caused by chewing, scratching and rubbing in response to the irritation of a high louse burden.

to 10 weeks after topical application and dicyclanil affords 16 weeks' full body protection.

Lice

Louse populations are highest during late winter in sheep in poor body condition kept under unhygienic conditions rather than the reverse situation where lice cause debility. The chewing louse *Bovicola ovis* is the most common infestation and may cause disrupted feeding patterns (Fig 7), fleece damage/loss (Figs 7-8), and self-inflicted trauma. Spread occurs by close contact. The slow reproductive capacity of *Bovicola ovis* results in a gradual build-up of louse numbers over several months.

The important differential diagnosis for flock problems of pruritus and fleece loss is psoroptic mange (sheep scab).



Fig 9: Characteristic dirt marks along the fleece over the neck caused by scratching with the hind feet in response to a high louse burden.

Reliance on systemic endectocides to control sheep scab has resulted in an upsurge of louse infestations in sheep flocks in the UK. Maintenance of a closed flock and effective biosecurity measures would prevent introduction of louse infestation.

Infestation can be readily eliminated by plunge dipping using a synthetic pyrethroid or organophosphate preparation. Use of plunge dipping for other reasons, such as control of sheep scab, cutaneous myiasis and headfly problems, also effectively controls louse infestations. Louse infestations can also be controlled with topical application of high *cis* cypermethrin or deltamethrin. The presence of lice on sheep reflects poorly upon biosecurity measures and the overall flock health plan and such infestation must prompt a review of these processes before more serious and costly infections are introduced.

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Discuss how health planning can improve the profitability of your farm with your veterinary surgeon.

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