

Vets across the UK have recently witnessed this year's first cases of photosensitisation in cattle. Louise Hartley speaks to vet Lottie Mayo about it.

# Be vigilant against photosensitisation

**P**hotosensitisation is seen sporadically in cattle and sheep in the UK, says Lottie Mayo, Shepton Farm Vets, Somerset.

"It can be either primary, caused by the ingestion of plants which contain photo-reactive toxins or secondary, caused by liver damage from copper poisoning, leptospirosis and the ingestion of toxic plants or blue-green algae.

"The damaged liver is unable to properly metabolise the chlorophyll in the grass, resulting in the photo-reactive toxins being produced."

The most commonly implicated plants for primary photosensitisation is St John's Wort and ragwort for secondary. Other plants which may be involved include lantana, lupins, buckwheat, brassicas, clovers and alfalfa.

"In both primary and secondary photosensitisation, photo-reactive agents are produced and spread throughout the body.

"In the skin, they react with the UV part of sunlight and cause damage to the skin cells. This results in redness and swelling of the skin, and if exposure to sunlight has been prolonged, it may be followed by necrosis [death of skin] and sloughing.

## Lesions

"In basic terms, they develop severe sunburn lesions. These lesions are only seen on non-pigmented skin with a sufficiently low density of hair cover, which allows the sunlight to penetrate to the skin surface. Dark skin reflects much of the UV light rather than absorbing it, so these areas are normally not affected."

Often lesions are most severe



on teats, udder and muzzle and usually one side of the animal is more severely affected than the other, where the animal has been lying down in the sunshine.

Affected animals may be suffering pain and lesions may be very itchy, leading to secondary damage as the animal scratches to relieve the irritation.

## Liver damage

In secondary photosensitisation there will also be signs of liver damage in the animal including jaundice, or in more severe cases head pressing and circling, says Mrs Mayo.

"These lesions are so dramatic and clearly demarcated on pale poorly coated skin, that diagnosis is normally quite straightforward.

"However, if you only notice the teats or mouth being affected you need to consider other potential problems.

"Other viral diseases can potentially show signs which resemble photosensitisation, but in these cases the lesions are usually much more localised on the body. For example, bovine mamillitis is a disease caused by the herpes virus, which causes similar looking lesions affecting the teats. Stomatitis, another viral disease, would cause lesions on the mouth.

"Even notifiable diseases such as bluetongue or foot-and-mouth should be considered."



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LOTTIE MAYO

## Treatment and prevention

TREATMENT of primary photosensitisation is quite straightforward, although full recovery of severe lesions may take several months, says Mrs Mayo.

"The animal needs to be removed from the relevant pasture to a cool enclosed shed where it has no access to direct sunlight and there is a low risk of flies.

"Initial treatment with nonsteroidal anti-inflammatories (flunixin meglumine or meloxicam) to relieve pain and swelling would be beneficial.

"Any sloughing or necrotic

areas will need managing to prevent infection by keeping the area clean, out of the sun and use of antibiotic spray.

"If these are extensive and severe, injectable antibiotics may be warranted and treatment to prevent fly strike should also be used.

"Affected animals can be let out to graze at night and, given time, most lesions will heal well. Hair will regrow as the hair follicles live deep down in the skin and are therefore not damaged, except in the most severe lesions."

Treatment of secondary

photosensitization is much less rewarding as generally liver damage is so severe normal function cannot be recovered.

Mrs Mayo says: "From a herd health perspective it is well worth investigating these secondary cases to determine the cause of the liver damage so action can be taken to prevent further cases in other animals. This may involve blood tests, liver biopsy and/or post mortem examination."

Prevention involves control of toxic plants on pastures and appropriate preservation of hay, silage and grain to prevent spoilage.

Ensuring animals are moved to fresh pasture before they get too short of grass and start investigating the hedgerows will also reduce the risks of photosensitisation.

## Sheep

Control for sheep and lambs is similar to cattle. Controlling plants with the potential for primary or secondary damage and providing shelter from the elements in the field (which is a legal requirement) should be considered, especially over the next few months as temperatures are set to rise.