

This is easy to prevent by doing the following.

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Spring eczema cause is photosensitivity. It is not related to Facial Eczema in any way, however, symptoms of spring eczema are a bit similar to those of facial eczema, but facial eczema usually has bigger lumps of skin peeling off. Both cause damage to the light coloured skin as shown on this cow belonging to Tony & Gwen Ashford of Ngatea. They had been helicopter spraying the whole farm twice a year once against facial eczema and once for weeds. This cow was the worst of many. All spring eczema stopped after I advised them to stop spraying, apply LimeMag (See Elements > Calcium and Magnesium), trace elements and the best reactive phosphate, all based on pasture analyses, and to feed Solminix in the drinking water to all animals on the farm. See Testimonials > Tony Ashford.



Correct fertilisers mean (after lime requirements have been corrected) reactive phosphate (even if pH is 6.5), elemental sulphur (essential with reactive phosphate), agricultural sea salt, necessary trace elements, and potassium only if below 2.4% in pasture, all based on pasture analyses. For the observant, I have lowered K optimum from 2.7% originally. Those in the northern hemisphere making total mixed rations, feed only 1% K. Pasture farmers have to aim for more to ensure the best possible clover growth. K of 4% can help cause Spring Eczema, and unhealthy animals and the death of red clover.

Spring eczema occurs mostly in late winter and early spring, and usually affects udders and teats more than facial eczema does, which occurs in summer and autumn. Spring eczema usually affects stressed animals when they are producing to the maximum. It is accentuated by high chlorophyll (a plant protein) intake from very fast growing grass, especially during the autumn flush after a long, hot, dry summer when nitrogen in soils is high, or after applying an excess of nitrogen and/or potassic fertiliser in early spring, particularly when minerals, especially zinc, are low. One of the best vets told me that MAP (Monoammonium phosphate) is the worst P fertiliser, and its pasture is the most disliked by cows. DAP is not far behind.

### Causes

Whereas Facial Eczema is caused by one specific toxin, Spring Eczema can occur from more than one stress and/or toxic factor, accentuated by huge amounts of chlorophyll in spring overloading the liver. Toxins stress the animal, with other causes accentuating the problem, such as a lack of sunshine, which raises pasture or crop nitrate levels and lowers magnesium absorption by animals. As in most stress related problems, double or triple whammies, hits, toxins, layering or snowballing of many factors bring on the symptoms.

Overloading the liver by any one or more of the following can cause the symptoms -

- Nitrate toxicity from too much applied N. See Animal Health > Nitrates.
- Prussic acid from sorghums. See Prussic Acid.
- Inducing, especially after the second injection and if the cow is thin. Two inducing injections can ruin a thin cow. Inducing should not be used at all. More effort should be put into healthy soils (LimeMagPlus and balanced fertilisers), healthy pastures (mixed) and healthy animals supplied with the DeLaval nine soluble minerals in the drinking water where possible. Hundreds of farmers have found that they calm animals.
- Grazing pastures previously sprayed with herbicides, such as 2,4-D and/or some fungicides aimed at preventing facial eczema.
- Too much bloat oil being used (more than 14 ml per cow per day).

- Overdosing with excess copper for too long.
- Excessive amounts of magnesium, or anything that overloads the liver or system. Some magnesium and zinc oxides contain toxic amounts of lead, arsenic, cadmium, etc. Avoid them at all costs.
  - Facial eczema, and/or liver fluke damaged livers.
  - Mouldy pasture, hay or silage.
  - Sensitivity to antibiotics.
  - Low zinc levels. Zinc is a strong antioxidant (preventer of the bad effects from toxins).
  - High endophyte levels in grasses. See Pastures > Grasses > Endophyte.
  - Grazing pasture after some liquid and/or some solid fertilisers (especially some slags and ashes) have NOT been washed off the plant, eating lumps dropped in the paddock, or from fertiliser bins or lanes. Deliberate eating of fertiliser is more inclined to happen where animals suffer from mineral deficiencies. Avoid using toxic ashes and slags anywhere on the farm, and feed a soluble nine-mineral mix through the drinking water.
    - Toxic weeds, algae or toxins in water troughs, or even toxic grasses such as Panicum, a red stemmed, dark green, prostrate summer grass.
    - Cattle will eat hormone sprayed ragwort. Ragwort is poisonous to cattle, but not to sheep unless a lot is eaten.
      - High manganese levels, usually in wet soils also needing agricultural LimeMagPlus.
      - Stress caused by calving, cycling, hunger, weather, electric shocks in farm dairies, bad dogs and rough people, especially if the liver has been damaged by facial eczema.

Fertilising with LimeMagPlus, salt and boron are elements that can improve pasture quality and palatability, as well as reducing the solubility and uptake of the toxic elements Aluminium, Iron and Manganese.

### Symptoms

Being a photosensitivity problem, animals seek shade. They sometimes walk around a lot, kick and stomp, twitch and flick their ears and tail, be off colour, lethargic and not doing well. Eyes and udder can become puffy, red and swollen. Skin in white areas becomes red, then scabs form.

It is not always a reason to cull, because it can be caused by management, or just bad luck by eating something toxic. In the spring and early summer, numerous cases of Spring Eczema are reported. It can strike cattle of all ages.

Appropriate treatment, if initiated in the early irritable stage, can minimise skin damage, and potential life long scarring and development of horny growths on the skin. Total removal from sunlight is probably the most effective, if done before significant skin damage occurs.

### Prevention

Ngatea farmers, Tony & Gwen Ashford, who had many cows suffer red udders and eczema every spring, got none within two years of doing what I recommended. These included ceasing blanket weed and facial eczema spore spraying by helicopter, and changing from 30% potassic super (0-6-15-8) to a good reactive phosphate, no potassium, with the necessary trace elements based on pasture tissue analyses, and dispensing Solminix DeLaval Feedtech soluble minerals which has the nine essential elements, through an on-line dispenser to the drinking water.

Avoid all possible causes because eczemas are a layering illness - the last straw breaks the camel's back, and eczema bursts out, sometimes aggravated by mineral imbalances, as well as deficiencies.

Feed Solminix daily in their water. It should contain -

Salt to help reduce temperature-change stress, increase saliva and improve the coat.

Magnesium, which helps the above and helps general health all year, but especially during winter cold, summer heat and milk fever periods.

Zinc, that is a strong antioxidant and buffer against eczema and some toxins. It also helps keep somatic cell counts down, improves hair, and vitamin A absorption which improves night vision.

Copper, to prevent scouring when molybdenum is high.

Cobalt, which ruminants require continuously to synthesise vitamin B12. Without vitamin B12, ruminants can't produce glucose for energy, so become lethargic and lose their appetite, accentuating their susceptibility to other problems. In a trial, Co supplemented lambs had fewer internal parasites and excreted fewer worm eggs. Co supplementation has prevented phalaris-staggers in sheep (RHM Langer, Pastures 1990), and some have found that low Co increases Grass Tetany (hypomagnesaemia). Excess calcium, magnesium or iodine levels can lower Co. Parasite numbers can increase and then get the blame for the ill thrift, when the real reason could be low Co. However, parasite infestation does accentuate problems in animals low in Co. When deficient, even mature stock can die very quickly because of the added effects of low appetite. Three cows in the eastern Waikato (not a severely deficient area) died and, before the vet could diagnose cobalt deficiency, three more died on the farm, which was very highly stocked and very highly fertilised with N, P and K, but not with Co.

Selenium, the lack of which can cause two to three metre zigzag manure droppings in paddocks, lower percentage of milk protein and severe calf problems.

Iodine, which if lacking slows the whole body, including cycling and its duration. Spraying teats with iodine to control mastitis supplies iodine to cows.

See the chapters on the above minerals under Elements, and in Animal Health, for more about each.

Solminix supplies an all round balance of elements important for optimum animal health, when grazing pastures only, and not feeding concentrates that have added minerals.

### **Treatment**

Restoring a severely damaged liver to its original condition is impossible, but anything that decreases the load on the liver and the body will help. Products like zinc, in the safe toxin-free Solminix which is a good soluble mineral mix of nine safe elements (without manganese if it is above 40 ppm in pastures).

Provide shade and ample spore-free food, including hay and/or silage, with facial eczema-free pasture, water and extra zinc.

The stock buyer of Barry Brunton of Rukuhia near Hamilton, bought beef heifers for NZ\$550. A quarter were facial eczema damaged. They were then given 0.008% (instead of 0.006%) of their weight in Solminix in the drinking water, and were grazed correctly limed and fertilised pasture and grew and went away prime in the normal time of late October 2010 for NZ\$1,000 each. Read Beef Profiting for more on this. Dairy and all animal farmers should read it for many good reasons.