

## Vitamin E Deficiency

### Description

Vitamin E is an oil based vitamin essential to normal muscle function. It is found in green feed, but breaks down rapidly once the feed dries off. Lucerne is an exception in that Vitamin E can be lacking even when lush and growing. Grains and hay do not have sufficient vitamin E for livestock.

Vitamin E is stored in the liver, and this store is built up while grazing green feed, then is used throughout the summer period, hopefully lasting through to the break of the season. Once the break has occurred and the grass shoots, Vitamin E levels rapidly build up again.

Vitamin E deficiency appears as ill thrift and weakness, but if severe can result in white muscle disease and death. The vitamin E deficient sheep will typically have the “hang dog” appearance which is often missed as the entire flock will appear similar, and it is put down to just “late summer / autumn poor feed”.

Stud or feed lot animals on high quality (high protein) rations may exhibit deficiency as well. These animals may show up with swollen joints (“hot hocks”), or while not fading in condition, may appear “soft”.

### Supplementation

Supplementation can be done in several ways, and the most commonly used technique is by injection, in combination with Vitamins A and D. There is a major problem associated with administering Vitamin E by injection – the body’s immune system reacts to the injection, and the Vitamin E is taken up into the lymph nodes and stored for up to 6 weeks. Attempting to correct a deficiency by injection can therefore take up to 6 weeks to reach its full effect.

Vitamin E is available in a water soluble powder that is readily absorbable from the gut. Responses to oral vitamin E can be seen within hours of administration. It is therefore viable to try a treatment response trial over 1 or 2 days on a sample group within a flock.

Vitamin E powder dose rates (50% Vitamin E powder)

**Sheep – 2 grams per head**

**Cattle 10 grams per head.**

A single dose is sufficient for several months, usually enough to make it through to the next green feed period.

Safety – a full dose such as this to an animal that is not deficient will not go anywhere near a toxic dose.