High Potassium Pastures

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Managing High Potash Pastures

By Chris Hibburt: Timboon Veterinary Group

The more diligent approach farmers are taking now to distribute their dairy and feed pad effluent over pastures has resulted in some surprisingly high potash levels in soils on these paddocks. This does not present a real problem to growing pastures, in fact it is often the case that such paddocks will grow exceptionally well as they usually have high phosphorus levels and are stimulated by the N applications that are part of the effluent distribution.

The challenge for us now is to spread that effluent over as much of the farm as possible and ideally on paddocks that are far from the dairy, not traditionally night paddocks and paddocks that are regularly cut for silage or hay.

What are the problems with high potash paddocks?

Pastures that grow on paddocks that have high potash levels will contain higher than normal levels of potassium. This is preserved in hay and silage as well. The danger that they pose to stock is that potassium is a cation that will bind calcium and magnesium in the gut as part of the body's mechanism to excrete it. That means there is less for absorption and cows that are in high demand for these elements will be at a greater risk of having milk fever or grass tetany or all the associated syndromes that come with metabolic deficiencies such as slow and difficult calvings, downer cows, LDA's and metritis.

In recent times the industry has recognised the value of lead feeding cows 2 weeks prior to calving with anionic salts to assist the body in mobilising calcium from bones and absorbing it from the gut. It then allows us to feed higher energy feeds prior to and just after calving with minimal risk of metabolic diseases. However, if these higher energy feeds are grown on pastures that are high in potash, the challenge may be too much for the lead feed regime to combat.

Therefore it is wise to have a source of good quality forages for springer cows that are taken from pastures grown on lower potash soils. Also we should avoid using forages that were cut from paddocks that had 60 or more kg of potassium applied in the months immediately prior to cutting the forages.

Cows in early lactation that are grazed on these high K pastures will be more vulnerable to metabolic diseases such as grass tetany and milk fever. The risk of these diseases will be off-set if there are appropriate steps in place such as diets balanced with addition of calcium, magnesium and sodium, and sufficient fibre in the diet to allow these to be absorbed.

TVG timboon veterinary group