

Issue 21 Monday 11 July 2005

T
A
L
K
T
O
S
O
M
E
O
N
E
W
H
O
C
A
R
E
S

What Trace Elements do my cattle need?

Trace elements or micronutrients are needed by stock for many functions including growth and reproduction. Micronutrients are required only in a very small or trace amount which is why they are also called trace elements. The trace elements required by stock are Copper, Cobalt, Zinc, Manganese, Selenium, Iodine and Iron. Molybdenum, Chromium and Nickel have also been shown to be essential in more recent research. Macronutrients are minerals that are required in greater amounts. They are Calcium, Phosphorous, Potassium, Sulphur, Sodium, Chlorine and Magnesium. Other elements are often listed on feed labels or even deliberately added to feed, however these are not required by ruminants and so should be ignored.

Trace elements can react with each other and form insoluble complexes. These complexes are not as well absorbed by the beast. By chelating trace elements we ensure that they are available for absorption and in a useable form. Chelation involves binding the trace element to an organic molecule which prevents it reacting with other elements. This makes the trace element highly absorbable. The trace elements in Quicklick and VitaLick are chelated with amino acids to ensure that they are available and highly absorbable.

Because the micronutrients are required in such small quantities excessive amounts can cause problems. There is however quite a range of tolerance and any balanced supplement should not cause problems with toxicity. Feeding more than one source of trace mineral supplements should however be avoided.

Deficiencies are quite common particularly on lighter and coastal country. The most common deficiencies are copper, cobalt and selenium. Copper deficiency first shows up as a dull coat colour due to the requirement for copper to produce coat pigments. Cobalt is required for the beast to manufacture vitamin B12 in the rumen. Vitamin B12 is required for some metabolic pathways and without it a loss of appetite and weight will occur leading to wasting away. As vitamin B12 can be stored in the body it takes some time for the symptoms to appear. Selenium deficiency is characterized by white muscle disease, lameness and heart failure.

Hidden or sub clinical deficiencies of trace elements are very common even on some of the so called better country. These hidden deficiencies manifest as lowered production without any symptom of the particular deficiency. An immediate improvement in coat condition upon feeding a trace element supplement is often the only way these problems are noticed.

Even if there is no known trace element deficiency in your country it should still be included in your lick. The small cost for added trace minerals ensures that your stock are not being held back by any shortfalls and so the maximum response can be obtained from the protein phosphorous and other macronutrients in the supplement.

Micronutrients or trace elements are essential for growth and reproduction. By supplying them in a chelated form that is highly absorbable deficiencies can be corrected and the production will not be limited. Adding trace minerals to your lick does not involve much cost and ensures that stock are not held back by hidden or sub clinical deficiencies.