



organic farming technical summary



Supplying Trace Elements to Cattle and Sheep at Grass

OFTS50

There is no doubt that the most effective way to supplement animals with trace elements is to include a suitable mineral/vitamin mix in concentrates or by dusting over silage – this ensures that all the animals get their allocation. However, for grazing animals it is necessary to use different methods and some methods are more effective than others. The trace elements most likely to be deficient are cobalt, copper, selenium and occasionally iodine. Supplementation should only be considered where there is historical evidence of a known deficiency on the farm that has resulted in poor animal performance (see OFTS4). Low blood levels of trace elements do not necessarily mean that performance will be affected. The various methods of supplementation are discussed below. With all of these methods you must ensure that the chemical form of the mineral you intend to supplement is approved for use in organic farming.

Self-feeding of free - choice minerals

This - the 'shotgun' approach - is probably the most widely used but also, unfortunately, is the least effective method. It relies on a wrong assumption - that animals know which minerals are needed and how much is required. Individual variation in intake from licks or blocks is huge, with some animals not taking any and others taking 3-4 times what they need. This system will fail to protect 30-50% of animals in the group. Self-help minerals usually contain between 20-30% salt and it is this that the animals go for. The use of self-help minerals is the last resort!

Drenching or injecting

Advantages are that all animals get the required amounts, but this method is only suitable for minerals such as copper and selenium which are stored in the body for months. Iodine and cobalt containing drenches can also be used, but dosing needs to be repeated every three weeks or so throughout the grazing season because animals do not build up stores of these elements.

Slow release bullets or boluses

A major advantage of these is that they last for months and they can be used to target individual deficiencies. If copper is the only problem then copper oxide needles can be used, but if cobalt and selenium are also deficient then a bolus containing all three elements should be used.

Added to drinking water

This is of no use if animals have access to other sources of water. Also, it is difficult to control intake because of variation in water intake. Animals on lush wet grass will not drink much water.

Soil fertiliser treatment with trace elements

This is a long-term solution to raise the levels of trace elements in grass. This can be effective in cases of simple deficiencies of cobalt, copper and selenium, but is ineffective if deficiency is caused by a poor availability for the plant or animal. Examples of these would be the application of cobalt on alkaline soils, or copper on land high in molybdenum.

Not all of these methods will be suitable for all farms and the method of choice will depend on individual farm circumstances.

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