

Feed Solmin through an online dispenser for healthier animals and less work.

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An important part of animal health and production is supplying the correct amount of the deficient minerals. In some countries it is added to grain based concentrates. The low price New Zealand farmers get for milk (Even at \$8.60 in 2014) and meat, makes all bought feeds unprofitable. It is much more profitable to reduce stock numbers. Many have proved it in their annual accounts. See the spreadsheet called Dairy Cow Numbers for Max Profit.

Animal production per hectare has increased over the years, but production per animal, in most cases, has not because of over-stocking and a lack of some minerals, which has always been. Muck on the tail of this cow photographed in about 1900 indicates low selenium, which is deficient in all New Zealand.

Until recently it was believed that copper deficiency, on deficient soils such as peats, could be completely overcome solely by topdressing with it, but now it is known that animals, especially young ones, benefit from the supply of additional copper on a regular basis through copper sulphate in the drinking water. Solminix contains this and eight others.

Even more importantly, the same applies to magnesium, because bodies don't have anywhere to store it, whereas copper is stored in the liver.

Some cattle can show no signs of deficiencies, while others in the same herd can almost die from a shortage, so in theory we could breed from animals that don't need supplements, but we'd go broke because of the length of time it would take to develop a whole herd. For more, read Minerals in Soils, Pastures & Animals > Copper, and Magnesium.

Some animals have evolved to survive with a minimum of selenium, but the total cost of supplementing 500 head of dry stock is only about \$5 a month. Clearly, providing adequate minerals reduces culling and promotes healthy animals. Read Minerals in Selenium,

The return on these supplemented minerals and elements from improved growth and better health exceeds the cost by many times. A trial on 160 calves, divided in two groups, showed that those getting Solminix consumed less pasture, needed less or no parasite drenching and grew faster, making the final cost of Solminix almost nothing. An important part of animal production is the supplying of minerals.

### Advantages of online dispensers

1. These need little setting up and adjusting. Set it so that most of the mix goes out within a few hours. Adding food colouring shows when it arrives and when it stops.
2. They are much easier to use than metering dispensers. See the spreadsheet > Minerals & Solminix Feeding to calculate the herd's daily requirements, which for Solminix is 0.006% of the total body weight, then dissolve it and pour it in the dispenser. If giving the cows or other animals two paddocks or pasture breaks a day, add half the day's requirements at each milking.
3. Online dispensers supply the daily requirements, even on rainy days when stock drink less. Metering ones need to be adjusted each time the animals' drinking habits change with the weather.
4. In the event of a leak on the farm, the online dispenser loses only the one day's minerals in it.
5. Farmers using online tank dispensers rather than metering ones, can relax with the knowledge that what is put into the tank dispenser goes to the animals that day.
6. There are no moving parts to wear out.
7. There are no jets to block, so no filters are required.
8. Any products can be used and they go out within a few hours followed by clean water, so pluronics aren't left in the pipes to damage alkathene piping.



9. They are all plastic with no metal parts to corrode. When using soluble minerals, steel can rust through within a few years. Some dispensers are metal. Galvanising them may not add to their life much because even galvanised steel rust with soluble minerals and the galvanising makes it difficult to weld to make leak proof joins. Also, any slag left over welds can break away (even if galvanised) and rust will then occur.

10. There is only one size which does up to 500 cows. For up to 1,000 cows use two on the same pipe line. If reservoirs or tanks can be used because all the water goes to troughs and none to homes or the dairy, dispensers may not be needed.

11. The cost is well below other systems.

12. They work on low gravity pressures or up to 690 kpa (100 psi). As long as water is moving through, the added material will be diluted and taken to the troughs being used.

13. There is a five year warranty on the tank.

14. Users are pleased with the ease of use. It is currently the best, in world.

Cook and Galloway Engineers in Hamilton make the simplest and cheapest online dispenser and sell direct to users.

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5 Belfast Place, Box 5117, Frankton, Hamilton 3242, 07-847-7583.

Powders should be dissolved before pouring into the dispenser, and corrosive materials should be poured in carefully.

### **Healthier goats**

Why do goats crave older plants and weeds, and more importantly, why do they thrive on them? These contain more minerals and it is known that goats and deer evolved on shrubs, so require more minerals than other ruminants.

Using an online dispenser makes it easy to dispense soluble minerals at the correct rate which then provides their sodium, magnesium, zinc, copper, cobalt, iodine and selenium requirements.

Of all ruminants, goats are the most dependent on iodine, so where this is lacking it can be easily supplemented with soluble minerals to avoid ill health, goitres and still-born kids.

Clovers, of course, contain more minerals and vitamins than grasses, but goats are not partial to clover, so once the weeds are grazed out, they end up with a diet of mainly grass.

### **Bloat**

When using bloat materials, farmers should be aware that some have a damaging effect on some alkathene piping, especially if pipes were stretched when laying. This could have been done by stretching with a mole plough, scratching it on stones or barbed wire, or over heating it when applying fittings. High density piping is less affected and PVC is not affected.