## Sodium Bicarbonate (Na2CO3) Version 1.0 29 July 2015

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Following publicity about Sodium Bicarbonate in the USA farming media in the 1990s, a research centre did a comparative trial, obviously aiming to prove that feeding sodium bicarbonate to pasture grazing dairy cows was of no advantage. 50 gm/cow/day was recommended by several experienced consultants, but the researchers drenched more than that during milkings. As with any product, drenching in one blob at milking is not as effective as supplying it through an on line dispenser in the drinking water, so that the product then mixes with the rumen contents over 24 hours. When developing and testing Solmin on twenty Waikato farms, some farmers changed from drenching to an online dispenser, and all noticed an improvement in effectiveness.

Despite this, the trial own figures showed that the increase in milk production was worth four times the cost of the sodium bicarbonate, but their media release stressed that its use was not economic. One would wonder why supposed research centres and people would do this, except for the Not Invented Here (NIH) sufferers, and not upsetting their sponsors which give millions of dollars annually to organisations in many countries.

Consequently it is still not commonly used. I have not seen it published, but our vet advises against feeding Sodium Bicarb to dry cows 'as it causes udder oedema'. TOO MUCH common salt does the same. Common salt, top dressed at 30 to 50 g/ha onto deficient (leaf measured) pastures, gives many advantages.

Never feed sodium bicarbonate to dry cows because it can cause oedema and milk fever at calving, because of its sodium content which also increases the risk of milk fever. Good soluble mineral mixes based on salt usually have magnesium sulphate as the second highest needed mineral (except in high magnesium areas), so is not a problem.

If sufficient salt is supplied, especially when feeding maize silage, sodium bicarb may not be beneficial.

Cattle grazing highly nutritious short pasture and fed finely ground concentrates can suffer subclinical acidosis and/or even displaced abomassums, especially if too much concentrates is fed once a day during milking or on empty stomachs, so despite being fed concentrates, animals may produce less milk or meat. With acidosis and rumen pH problems, sodium propionate can be better than sodium bicarbonate because the former has glucose giving energy, which is especially useful for ketotic cows. It also dissolves more quickly.

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