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The Return of Natural Fertilisers

The name "fertiliser" can loosely be used as a label for any material that is applied to help boost the process of primary production. In our modern world, "fertiliser" typically equates to some kind of manufactured inorganic material, generally containing a certain fixed percentage of nutrients eg superphosphate (P – 9%, S – 11%, Ca – 20%). However, if it were possible to go back in time a 100 years, it is likely that "fertiliser" would mean something different, and most likely people would think of a natural, organic product.

A wide variety of materials can be fertilisers eg rock minerals, seaweed extract, green waste and compost, chicken (and other animal) manures , vermicast, various humate extracts – to name a few - as well as the more familiar manufactured products. The modern fertiliser consumer has a wide variety of choices. Consumers also have different reasons for using different fertiliser products i.e. some desire a more holistic approach to production, others want to operate in a more sustainable way or to be better managers of our environment, while still others are concerned about the level of chemicals used to produce our food.

In more recent times, metropolitan and local territorial authorities have entered the fertiliser industry. Until recently, green waste was a significant component of most landfills, costing significant amounts of ratepayer monies to dispose of it. In recent times both the Christchurch City Council and the Timaru District Council, have introduced household collection systems to divert green waste from landfill and to turn it into an extremely valuable resource, compost.

Compost is the end product of the natural decomposition of organic material. The composting plants at Timaru and Christchurch are now generating good quantities of compost which is available to primary producers. This is of great benefit in Canterbury given that most of our soils are rather light with a low content of organic material.

Compost and other animal manures are both soil conditioning agents and fertilisers. The value of a fertiliser product is usually assessed in terms of "its bang per buck" i.e. what unit weight of nutrient(s) will it supply and what is the cost of purchasing, transporting and applying the product. Using this approach, the high analysis inorganic fertilisers are often regarded as being more "cost effective" in terms of their ability to supply nutrients. But soil is much more than a collection of chemical nutrients.

A "good soil" is one which has an adequate availability of essential nutrients and which is also "alive" with a healthy living biology – the numerous living creatures and plants, including the myriad of micro-organisms, which populate the soil. Soil biology is the key driver of soil fertility. The percentage of nutrients printed on a fertiliser bag does really mean very much if the soil does not have a healthy biology. Nutrient availability and soil biology go "hand and glove." The sooner primary producers appreciate this, the sooner they will see significant improvements in the functioning and productive potential of their soil. This in turn will also benefit the urban population as better soils will produce better, more nutrient dense foods for our growing population.