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HOW TO MAINTAIN 250SU/ha!

“Stocking rate” is a term which indicates how many animals a farm can comfortably run. As such it is a good pointer to its fertility and economic potential. Equally important in this regard and usually overlooked, is the stocking rate of the invisible organisms that live below the surface of the ground.

Every soil is “alive” with millions of tiny creatures, ranging from the larger and more familiar earthworms through to the microscopic bacteria and fungi. A cube of soil dug with a spade may contain just a handful of earthworms. However, just a teaspoon of soil can easily contain tens of billions of bacteria. In fact, estimates of the total weight of soil organisms under a pastoral farming regime is equivalent to an above the ground stocking rate of 250 sheep/ha! That’s a lot of “microscopic mouths” to feed.

What supplies the food and energy requirements of these organisms? Soil organic matter! The living soil feeds on dead and decaying plant and animal tissue and residues. After meeting its own requirements, these soil creatures then make available surplus nutrients from the decomposition of organic matter for plants growing in the soil. An active soil life is therefore a critical component of soil fertility. It is the driving force behind the various nutrient cycles operating within a soil and helps to maintain the essential pool of plant available nutrients.

Just as legumes provide nitrogen “free” to the farmer, in the same way, healthy populations of soil organisms release and make available nutrients that are essential to the growing plant, also for free. Accordingly, a wise farmer will seek to provide optimal conditions to maintain high below ground stocking rates.

What can be done to foster such conditions? Regular applications of finely ground lime; seeking to maintain good soil structure, porosity and moisture status; ensuring both pH and soil nutrient levels are adequate. Also important in this regard, is a knowledge of the level of organic matter in the soil. Strangely, most basic and/or “free” soil tests do not even measure this important soil property. Without such information, how can a farmer possibly make good and informed soil management decisions? Farmers should monitor soil organic matter levels as part of their regular soil testing regime. This will help them to maintain or improve the vital below ground stocking rates on their farms.