



## Products & Advice for Regenerative Agriculture

# Low Chemical Farming Practices help to Regenerate Soil Fertility & Reduce Costs

### Soil Regeneration takes time...

Just as soil fertility has declined over many years of farming, the process of soil regeneration needs to be addressed over a period of time. In short, changing one management practice or applying a specific product may be a start... but not the total answer.

### The 3 Aspects of Soil Fertility...

1. **Nutritional** - the availability of Mineral Elements
2. **Biological** - the life in the soil (Microbe and worm activity)
3. **Structural** - the physical nature of the soil - eg friability

Each of the aspects of soil fertility are all important from an individual point of view as well as being interdependent on one another.

The use of chemical, water soluble fertilizer has been widely used as a nutritional substitute for organic minerals in the soil, however its use has contributed to increasing problems with the Biological and therefore the Structural aspects of soil fertility.

Many farmers are experiencing compacted soil, low organic carbon levels, pH problems, increased pests and disease and the need to constantly increase the amount of water soluble fertilizer.

The benefits of Microorganisms is becoming well known and more and more farmers are turning toward more natural ways and are reaping the benefits that increased Biological activity can bring.

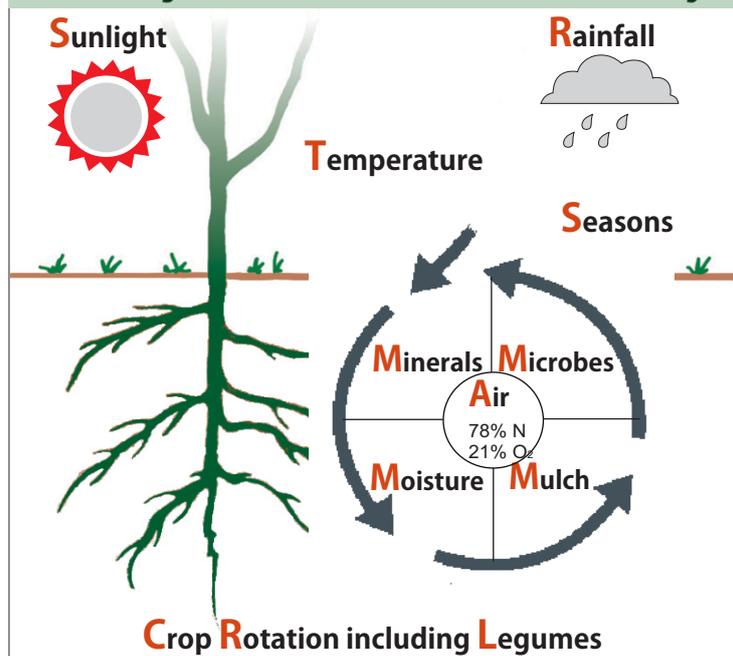
### Natra Min can reduce or eliminate the use of water soluble fertilizer...

Natra Min is registered for Organic Use and provides the broad spectrum of mineral elements to the soil. It has an inbuilt releaser to stimulate microbe and worm activity to ensure the conversion of the organic minerals into plant available form. Natra Min is available in four different blends to meet the need for higher levels of Phosphorus, Calcium, Sulphur or Potassium.

Once these minerals are applied, many farmers are finding that they are able to progressively reduce the amounts of water soluble fertilizer required.

Depending on the crop grown, it is usually possible to reduce the amount of water soluble fertilizer from 25 to 50% providing Natra Min has been applied 4 - 6 weeks prior to planting. For existing pasture, Natra Min alone can be used.

### The Major Influences on Soil Fertility



### Soil Testing...

We recommend having a soil test every two to four years. This will tell you a great deal about your soil health and it gives a good indication of action required to address imbalances or deficiencies. A soil test also provides a reference point to measure soil regeneration progress.

### Repeat applications are beneficial...

Many farmers have reported that the repeated use of Natra Min in addition to following a soil management program of mulching, legume based crop rotation and soil aeration, assists them to further reduce the use of chemical fertilizers.

### Continuous Improvement Achieved...

After using Natra Min on each crop for the past two years I have noticed the soil structure is improving. I have been able to eliminate the use of all chemical fertilizers.

Barley in 2001 yielded 3.75 tonne / hectare at 10.3 protein. Soy Beans yielded 2.75 tonne to the hectare. These results were very pleasing for me considering

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Fertile soil can **INCREASE** your production and **SAVE** you money.  
Fax your soil test or phone us now for practical advice  
on how to regenerate fertility to your soil.

# Management Practices for Soil Regeneration

## Farming Microbes...

If you can learn to make use of the free services provided by biological activity, you will be closer to achieving ecological and economic soil regeneration...

Earthworm and microorganism castings and residuals contain increased amounts of plant nutrients. For example, in parent soil without microorganisms and earthworms and of the same soil after it is worked by microorganisms and earthworms, the following increases in nutrient were shown (Dr W Jackson, USA)

- Nitrate increase 500%
- Available Phosphorus 700%
- Exchangeable Potassium 1200%
- Exchangeable Calcium 150%
- Organic Carbon 200%

## Saving \$\$\$ Down Under...

It has been studied and proven that the use of soil microbes becomes increasingly important in revitalizing the soil rapidly, safely and economically.

Australian studies have shown that when soil organisms die and decompose, they bequeath a pool of slow-release nitrogen for plants, for instance 45% of the dry weight of insects is nitrogen. The value of this soil nitrogen turned into dollar terms, ranged between \$14 per hectare on some properties and \$76 per hectare on an organic property. (Dr Matt Colloff, CSIRO)

## Less Pests...

“the properties with low soil diversity often had at least one major pest species causing serious economic damage. Properties with high soil biodiversity were found to have many kinds of pests, but none causing significant crop damage.”

(Dr Matt Colloff, CSIRO)

## Many other benefits...

The list of benefits from the work of soil organisms is extensive. You can save on Fertilizer, Lime & Gypsum, Tillage, Irrigation, Pesticide and Fungicide costs.

### Soil Microbes...

- Produce their own weight in humus every day, helping in improve soil structure
- Neutralizes pH in both alkaline and acid soil
- Create a storehouse for water and nutrients
- Increase nutrient availability
- Help to suppress and prevent disease
- Act as bio-filters to clean up pollutants in your soil
- Lead to increased productivity at a lower cost

Research is constantly finding and confirming what many farmers have always known. Soil organisms are essential for soil health and economic crop production.

Your local Agent



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**THANKYOU....**

We would like to say 'Thank You' to all of the farmers who have shared with us their experiences of using Natra Min and Superior. We appreciate

## Pasture Improvement using Natra Min...

Roy Hamilton, Dairy Farmer, Coraki, has found that the use of Natra Min has made a difference to his soil condition as well as improved health in his cattle.

- Clover content in Rye grass has improve immensely
- Soil breaks down very easily compared to how it used to be
- Where Natra Min was used, only one application of chemical fertilizer has been used during the last two years
- 80% reduction in milk fever problems

## Protect, Nourish and Stimulate your Soil's Microorganisms...

When confronted with hostile conditions such as lack of moisture or toxic conditions, microorganisms such as bacteria retreat to a spore form... a type of hibernation.

It seems that worm activity has a similar “hibernation” habit. Many farmers report that despite not having worm activity for many years, they are astonished at the sudden increase in worm activity after using Natra Min on their soil. The main question has been... “but where did they come from?” It seems likely that the eggs remain dormant until conditions are suited for their survival.

Having established the obvious, that healthy soil with high levels of organic matter and healthy microbial population provide the ideal environment for crops, our next consideration is how to achieve this desired goal.

Roy has achieved these results by following a program that has steadily reduced his chemical fertilizer inputs. He has applied Natra Min yearly, returns mulch regularly and has a legume in his cropping program.

The application of Minerals and Mulch, coupled with the reduction in chemical fertilizer, provides an ideal environment for the soil microbes to thrive.



**Minerals - essential for  
Animal Health  
& Production**

Supplementing during winter or drought conditions is primarily about avoiding losses. During period of lush pasture growth, clinical or sub clinical mineral deficiencies can restrict animal performance.

Extensive trials have proven supplementing during periods of good pasture growth provides the grazier with the opportunity to generate extra profit.

**MINERALS - Essential for Animal Health & Soil Fertility**