

## June 2016 Biological Farming Roundtable Notes

**What:** The Biological Farming Roundtable was held at the NutriSoil Production and Education Facility on Thursday the 30th of June.

**Why:** The aim of the Biological Farming Roundtable is to initiate discussion on biological farming, helping farmers explore innovative, low input, regenerative, profitable and productive farming systems.

The group supports each other's journey in an emerging regenerative agricultural paradigm where dominant conventional views can often be a barrier to change and success.

### What's To Come for 2016?

**August 25th:** Nutrient Management with David Hardwick.

**October 27th:** Focus Farmer Session - Learning from the Champions.

**Who:** This Roundtable discussion was led by Agroecologist David Hardwick on demystifying alternative products. David provided an informative presentation on types of products that are available in the market, how to read or ask for their analysis and what purpose you may use them for. Three handouts were provided to assist farmers choose and assess which product is best for their farming program.



### Handout One: Choosing Soil and Farm Fertility Products

When choosing which product to use in lifting your soils fertility, you need to be clear about what type of product you need. Are you wanting to lift overall fertility, manage a major soil constraint or increase and stimulate biological life and processes in the soil? The following handout can assist a farmer through this process.

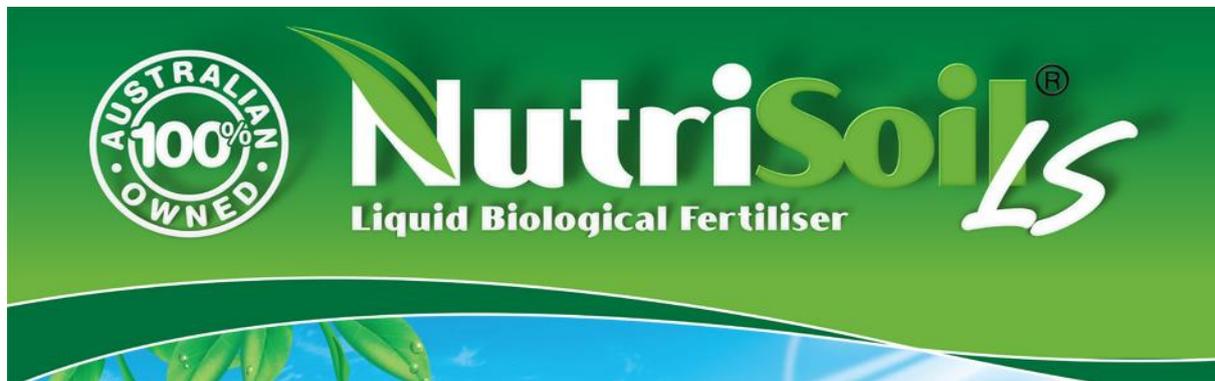
[www.nutrisoil.com.au/biologicalfarming/Choosing Soil & Farm Fertility Products](http://www.nutrisoil.com.au/biologicalfarming/Choosing%20Soil%20&%20Farm%20Fertility%20Products)



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## Assessing Fertility Products

Once you have identified your reason for using an input and chosen the type of input you need, how then do you assess which type of product to use? i.e. if you are choosing between a worm liquid and a live microbial culture (i.e. VAM) to increase soil biological life, which product will be easiest to apply and store? Is it a proven technology or do I need to begin with trials?

The following handout can assist a farmer through this process.

[www.nutrisoil.com.au/biological\\_farming/Assessing Farm Fertility Products](http://www.nutrisoil.com.au/biological_farming/Assessing_Farm_Fertility_Products).

## A summary of Products for increasing Soil Mineral Fertility

The following is a table which provides a list of common fertility products that can assist in increasing fertility in the soil.

[www.nutrisoil.com.au/products\\_for\\_increasing\\_soil\\_mineral\\_fertility](http://www.nutrisoil.com.au/products_for_increasing_soil_mineral_fertility)

## But what about my Phosphorus?

This question is often asked. "If I am exporting a major nutrient from the soil such as phosphorous and not replenishing it in a soluble fertiliser (i.e. Super Phosphate, MAP, DAP) where do my plants get it from?"

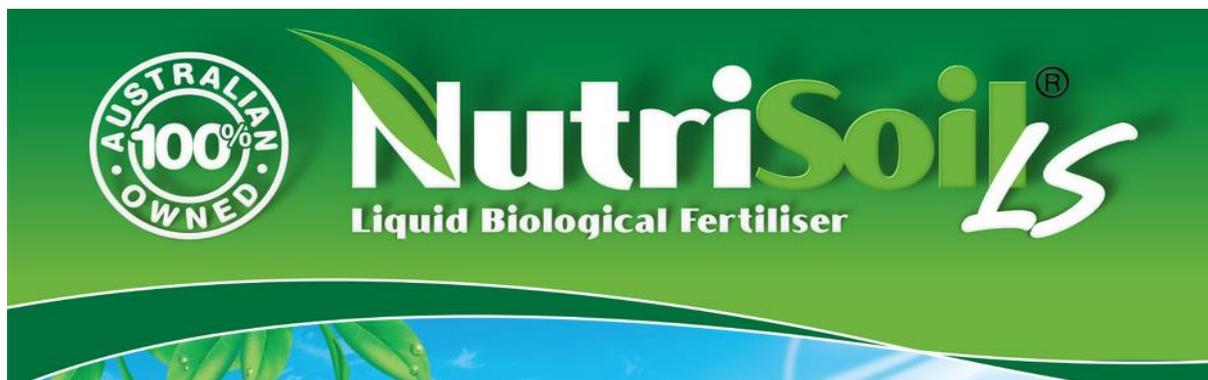
It is true that some areas of Australia are low in Phosphorous. For example, P in a black soil in South East Queensland may test at 1294ppm of the total nutrient reserve where a Central Western NSW Cropping Soil P may test at 134ppm of the total nutrient reserve.



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If a soil has had a long history of a soluble phosphorous such as Superphosphate, MAP or DAP – which has been treated with an acid or gas, the soil may have a reserve amount of P locked up or bound to other minerals – especially if the soil PH is low (acidic), high in Iron or Aluminium.

While the acidification of soil is a natural process that occurs over thousands of years, some soluble fertilisers are also key contributors to the accelerated acidification of soils. When a soil is acidic P can react very quickly with the soil, chemically bonding to clay minerals, aluminium and iron.

A typical analysis of Superphosphate contains less than 10% Phosphorous and it is generally accepted that only 20-30% is actually taken up the year of application when applied. The remaining phosphorous not taken up by the plant then enters the soil and some of it may bond to other minerals in the soil and becomes unavailable to the plant.

If a soil has had years of soluble P fertiliser applications or the minerals of your soil have a reasonable reserve of P naturally, then you may have enough phosphorus locked up in your soil for a number of years. This is may be the place to use a bio-fertiliser/stimulant that feeds or signals to the plant roots and/or microbes initiating them to solubilise phosphorous and making it available for plant uptake.

When using a bio fertiliser/stimulant it will be essential to practice other soil health practices that will capture energy (increase photosynthetic capacity) in your soil to prime the nutrient cycling process. E.g. reduce soluble fertiliser and pesticide use, minimise tillage, planned grazing practices, decreasing monocultures, using crop rotations, cover crops, green and brown manuring etc.



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