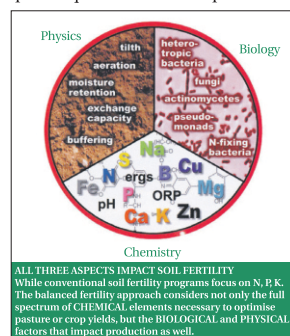


# Healthy plants and animals start with Top Soils

A comprehensive Albrecht-Kinsey soil audit from Top Soils provides farmers with the information to identify soil nutrient excesses or deficiencies as the basis for sound fertiliser decisions.

Over the last 60 years science and research in the world has been concentrating on Production, this included, chemical and fertiliser companies, Ag research and Universities, and we have been very good at it. The innovation of farmers world-wide has seen yields of produce double, even quadruple. The consequence



is a huge removal of soil nutrients with only limited nutrient replacement with say superphosphates and urea. With this huge focus on production, Science has neglected CAUSE and concentrated on EFFECT.

## It's time for new thinking

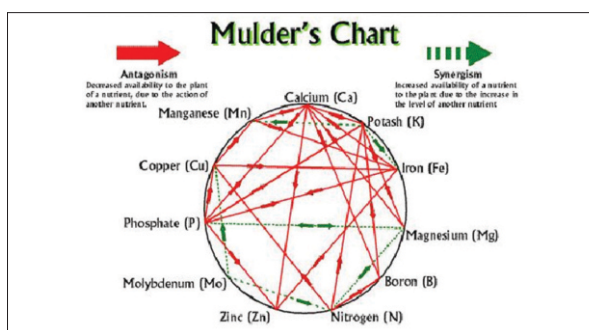
The balanced fertility approach focuses on correct balance in soil nutrients to affect the Chemistry, Physics and Biology of the soil which results in: healthy soils, healthy plants and healthy animals.

There is a direct relationship between the minerals in the soil and the health of plants and animals. Just buying and applying nutrients to the soil will not get them into plants.

Even if you have all the minerals a plant requires at optimal soil levels there is no guarantee the plant can access them.

Productivity is determined by the most limiting factor.

This is not always N,P, K&S the soil is a complex system where many nutrients interact with each other (See



Mulder's chart.) Excesses in one nutrient can antagonise the uptake of another soil nutrient, for example Phosphorous and Zinc.

Or the opposite can be the case where elements are responsible for solubilising nutrients for uptake by the plant for example Boron and Calcium.

If we are not measuring these elements we cannot manage them and the others they influence efficiently.

The application of unbalanced fertilisers can result in complex soil interactions that can lead to additional deficiencies in plant available nutrients.

While N,P,K & S are the main drivers for production, soils need the correct balance of soil nutrients to affect chemistry, physics and micro biology of the soil.

Trace minerals are important for producing metabolites. Primary metabolites are synthesized by plants for growth and development. Secondary Metabolites are defence chemicals produced by plants for strengthening plants immune system improving suppression of disease and pathogen attacks.

Calcium and Magnesium are the two nutrients that impact soil structure and compaction

with magnesium tightening and calcium flocculating the soil.

The key is to see fertilisers in a different light.

Not just applied to assist plant growth, but, are required in a balanced way for a diverse role of functions in nature. See them as an investment not as a cost.

## The Albrecht-Kinsey system of soil fertility emphasises time and again, if it is true science it is repeatable

So let the results speak for themselves, not some reasoning because our soils are different here: it cannot possibly work here.

Top Soils principally offer a range of products and services that improves soil fertility, restoring mineral, structural and microbial balance of the soil by balancing fertiliser nutrient availability, promoting productivity and protecting the environment.

# Top Soils

TOTAL SOIL FERTILITY SOLUTIONS

Mineral requirements for crops and animals increase dramatically in response to differing growth stages. Ad-lib mineral requirements for stock indicates a shortage in forage minerals, indicating soil deficits.

Balanced soils ensure access to critical nutrients during periods of high demand.  
= Healthier soils, plants with higher nutritional quality levels & healthier animals.

## Top Soils custom blend fertilisers to address YOUR soils most limiting factors & restore balance using...

- Soluble & Mineral NPKS — **Dolomite** & Lime — Trace Elements

### Magnesium (Mg): importance of balance...

Years of pH driven Lime applications can lead to inflated Calcium:Magnesium.

Mg & Calcium — the two most influential elements in soil structure

Mg — the central element in chlorophyll

Mg — recognised for its role in a wide range of metabolic diseases incl grass staggers, milk fever.

The Kinsey Albrecht System of soil fertility aims for 68% Ca and 12% Mg.

Growers are achieving this using Top Soils blends including **Dolomite** (Table 1).

Table 1		Ca %	Mg %	Ca %	Mg %	Ca %	Mg %
		2012		2013		2014	
Springfield Est	PK A3	57.51	6.53	64.4	7.95	67.8	11.82
	PK F1	72.8	6.87	70.79	6.5	68.8	10.54
		2011		2012		2014	
Chris Rollinson	PK 40	46.25	5.78	54.01	9.7	65.82	15.7
	PK 49	50.68	4.06	55.66	5.12	60.73	10.74

| REAL fertilisers | REAL productivity | REAL results |  
REAL return on investment

To see how

**Top Soils**  
TOTAL SOIL FERTILITY SOLUTIONS

can improve  
your soils  
contact...

STORED &  
AVAILABLE  
ONSITE

Biological and Soil fertility Consultant Don Hart 027 432 0187 – 03 302 8191  
Lydia-Beth Gundry BSc Plant Science and Horticulture 027 698 9907

## Biological & soil fertility consultants

Investing in a soil audit for your farm and using our soil-balancing programme, recommendations and fertilisers, results in a return of increased sustainability, productivity and performance.

An investment in balancing soil nutrients using the Kinsey Albrecht System of Soil Fertility with Top Soils provides a profitable return and a sustainable farming system.

A balanced soil requires less nitrogen, has less environmental impact and promotes increased production and yields.

Balanced soil nutrients results in healthier soils, plants and animals because of the higher quality nutritional levels.

If ad-lib minerals are required for animals, this indicates a shortage in forage minerals – indicating a deficit in the soil.

Balance soils have fewer weeds, pest and diseases, and also require-less chemicals and pesticides.

Top Soils, soil-balancing programme and fertilisers only use nutrients that build and maintain soil nutrient levels for future production.

SO LET THE RESULTS SPEAK FOR  
THEMSELVES...I GUARANTEE IT!

| REAL fertilisers |  
| REAL productivity | REAL results |  
REAL return on investment

Importers  
of quality  
mineral  
Fertilisers