

**Creating wealth...
using innovative technology**



WORLD FOCUS

1596 (Pty) Ltd

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At van Schalkwyk

Director of Marketing

Thirteen years ago we started investigations and study of micro-organisms and the help that nature can provide to the farmer to get optimum crop production and welfare. We also started with the application of micro-organisms on land directly on the crops, with unpredictable and sometimes catastrophic results. We then moved the study to the reason why there were sometimes positive results when living organisms on the crop or land were applied. The result is that we now do the biology in the factory Delmas under controlled conditions. From there Epipolithiedioperazyne a natural enzyme is extracted and used as the active ingredient in a plant growth stimulant. Gliogrow is the product of many years of work with a registration in 2009. From here a variety of products, among other things Gliomax, Gliosense, Glionut, Gliograin and Gliocane.

During 2012, we made a biochemical engineer part of our business and his first assignment was, facilitating the optimal application of Agricultural Lime. The end of the assignment is micronized lime/gypsum (CaCO_3 , MgCO_3 , CaSO_4) which is not in the place for normal liming but bring other options of applying and usage of lime to the farmer. Micronized lime are parent rock limestone directly from the mine processed in Delmas to a micro-fine milled product. (5% $< 1\mu$, 15% $\leq 10\mu - 1\mu$, 75% $\leq 15\mu - 10\mu$). The micronized products are also registered with the Department of Agriculture and Fisheries under Act 36 of 1947 with B-numbers. Our Gypsum are of the purest source known in South Africa. During the past five years, we also develop a foliar-feed range, where the nutrients are chelated with organic acid, amino acids and fulvic acid. This range is called the Complex Super Range.

During the past seven years, we established a market in various production areas in South Africa, Namibia, Zambia, Mozambique and now taking on the Australian market with trials for the past two years done in Western Australia.

Vision: Creating Wealth by using Innovative technology.

Mission: Management of plant energy, enhancing soil and plant health, using different ranges of innovative products.

Thank you for the interest and support.

At van Schalkwyk





Joe van der Merwe

Technical Director

The pressure to produce more and better quality food for the increasing population of the world, together with the ever increasing input cost burden on farming, highlights the need for innovative farming products and practices. Because of all the technological advances being made in agriculture and the impact thereof on energy and water expenses, crop and land management as well as yield, agriculture is in the process of experiencing a major leap towards precision farming methods.

With these advancements, our company identified the opportunity to research and to develop technologically advanced products for the agricultural industry. Cost saving, waste reduction and soil quality, as the driving factors, lead to the development of micronized lime. Packing material waste are minimized, dried product leads to reduced volume and weight transported. The result of reduced application volumes is reduced application cost. The product is compatible with all the precision farming equipment and is a valuable commodity for soil quality management. Micronized lime is applied with standard or precision spray applicators and moves lime to the precision commodity list. Our production equipment was imported from leading international manufacturers and specifically built for micronized milling application. The plant has sufficient capacity to supply more than the expected demand for the product in the local market.

The benefits thereof has been recognised worldwide, increasing the demand for Micronizes lime, especially in Africa where transport makes out a huge portion of production costs.

Creating wealth by using innovative technology
takes place in the soil, in the roots and in the plant.

Micronized Enriched Lime - to improve the soil or growth medium:

Complex Calsus. - Calcium (Ca) - 400g/kg, Magnesium (Mg) - 30 g/kg
(CaCO₃) Organic components - 30 g/kg

Complex Calsul - Calcium (Ca) - 230g/kg, Sulphur (S) - 140 g/kg
(CaSO₄) Organic components - 30 g/kg

CCM - Calcium (Ca) - 190g/kg, Magnesium (Mg) - 110 g/kg
(CaMgCO₃) Organic components - 30 g/kg

To promote vigorous root growth:

COA Fertigation - Nitrogen (N) - 56g/kg, Sulphur (S) - 5 g/kg

Complex Root - Boron (B) - 2 g/kg, Manganese (Mn) - 1 g/kg

As a foliar application the following products will ensure optimal support of plant nutrients:

Gliogrow ETP - 1.5µg/ml

Gliomax ETP - 1.5 µg/ml, Potassium (K) - 9.0 g/l, Phosphorus (P) - 2.8 g/l, Nitrogen (N) - 7.17g/kg,
Manganese (Mn) - 0,3 g/l, Copper (Cu) - 0,1 g/l, Magnesium (Mg) - 1.0 g/kg,
Kelp extract.

Gliosense ETP - 1.5µg/ml, Manganese (Mn) - 39.8 g/l, Boron (B) - 1.0 g/l, Copper (Cu) - 8.8 g/l,
Iron (Fe) - 9.8 g/l, Zinc (Zn) - 21.0 g/l, Molybdenum (Mo) - 0.304 g/kg.

Glionut Zinc 106 mg/kg⁻¹(Zn), Molybdenum 3 mg/kg⁻¹(Mo), Copper 18 mg/kg⁻¹(Cu), Iron 112 mg/kg⁻¹(Fe),
Boron 21 mg/kg⁻¹(B), Manganese 118 mg/kg⁻¹(Mn). Nickel 1227 mg/kg⁻¹(Ni)

Gliograin Zinc 82 mg/kg⁻¹(Zn), Molybdenum 2 mg/kg⁻¹(Mo), Copper 6 mg/kg⁻¹(Cu),
Iron 199 mg/kg⁻¹(Fe), Boron 409 mg/kg⁻¹(B), Manganese 378 mg/kg⁻¹(Mn).

Gliocain Zinc 85 mg/kg⁻¹(Zn), Molybdenum 2 mg/kg⁻¹(Mo), Copper 7 mg/kg⁻¹(Cu),
Iron 82 mg/kg⁻¹(Fe), Boron 40 mg/kg⁻¹(B), Manganese 30 mg/kg⁻¹(Mn).

COA Foliar Nitrogen (N) - 21 g/kg, Sulphur (S) - 2 g/kg, + combination of Fulvic, Hamates & Humids.

Complex SuperB Boron - 59 g/kg, SG = 1.2

Complex SuperK Potassium (K) - 89 g/kg, Nitrogen (N) - 25 g/kg SG = 1.2

Complex SuperCa Calcium (Ca) - 70 g/kg, Nitrogen (N) - 45 g/kg, SG = 1.3

Complex SugarRush Boron (B) - 22 g/kg, Manganese (Mn) - 3 g/kg

Inyati Powder Nitrogen (N) - 144.7 g/kg, Potassium (K) - 13.86 g/kg,
Sulphur (S) - 2.04 g/kg

Chelated with a
combination of
Fulvic + Humates

Energy management and the intake of Ca/K

We are all familiar with the concept of mass balance and energy balance. Any biological system, including our own bodies consist of a mass balance and energy balance. In crop production we focus a lot of energy and energy cost on the mass balance part of the plant's needs; Bringing the balance and / or growth medium into balance in terms of nutrients and other relevant aspects.

The question remains how can we efficiently do energy management in a plant? We "balance" all the Nutrients in the soil, but the results are not always as expected. There is no lush growth, Pathogens get stuck or harmful insects come visit the crops for reproduction. The yield remains far behind the genetic potential of the particular crop. The solution to the issue is effective energy management in the plant and in the soil.

In nature there are some systems that also enable the plant to better manage its energy like for example the effect of metabolites on soil life. The key to success lies with certain secondary metabolites that secrete organisms.

Like ureas and glomalin, ETP (Epipoydioxiperizine) is also supposed to be available freely in nature. Urease is fortunately not a problem. ETP is an enzyme derived from fungi such as below other trichoderma. An effective key to plant energy management lies in the ETP that contains the organisms as metabolites return to the plant in the symbiotic relationship when it is effective in the rhizosphere.

It is sometimes difficult to get the rizosphere in a commercial environment so that the living Organisms secrete enough ETP to obtain the desired effect. For this reason, ETP (Gliogrow) can be used as Foliar application is used to obtain the desired effect repeatedly. The effect of ETP on the plant is Including the following:

- Increased root growth activity (since the plant still wants access to the metabolite)
- Increased enzyme activation for the plant's metabolic management and nutrient uptake
- Increase in the concentration of the complex plant sugar / nutrients (Brix)
- Increase in the concentration of abscissic acid and plant therapy
- Increased photosynthesis activity;
- Balance between photosynthesis and respiration.

If this effect of increased enzyme activation is further used in energy management and Plant protection process the following can be expected:

- By using ETP together with an essential, yet difficult leaf-absorbable element such as Ca, the effect can be exceptional. The combination of increased enzyme activation and secondary metabolite-taught Ca, form Ca-calmodium (enzyme), acting as a second messenger for the synthesis of "protections" proteins. A similar effect is obtained with the increased uptake of K, by the secondary metabolite- taught K to keep the concentrations of the ripening enzyme constant. This makes for a more even ripening. Due to above average increase in plant metabolism, there is a significant increase in sugar, starch and amino acid production within the plant. These extremely favorable conditions have improved flower and fruit formation, and thus increased yield, improved fruit quality and shelf life.

Another further increase in plant energy can be achieved by the optimal management of administered Nitrates versus Ammonium in the plant. This can be accomplished with the use of the secondary metabolite yellowing of Ca and K ash, alternatively to calcium nitrate and potassium nitrate. This causes the plant to reduce Nitrates to Amiene for the Krebs process necessary for the production of amino acids. The decrease in reduction results in decreased plant response, which is the precious complex plant sugars and available energy.

Gliogrow is a natural product that leaves no residue after application and can effectively use on any crop before the plant enters a high energy demand phase. (Initiation, Cell division and Fruitfill).

A Unique solution for all crops... a new era



SUITABLE FOR ALL CROPS

Leaf application from early development, even when in flower and before harvest. No withholding period.

Powerful new Natural Biology

- ETP (1.5 µg/ml) and enhancers.
- Improved energy levels during periods of high demand.
- Improvement in photosynthetic efficiency with measurable effects on sugar and starch production and therefore yield.
- Translaminure uptake.

Benefits

- Improves growth.
- Uniformed harvest.
- Reduce the incidence of appeared-ripe fruit.

All centre pivot applications must be increased by 25%.

When the unique energy requirement of a plant is not fulfilled due to inefficient metabolic rate, the plant can experience an "energy crisis". This is so called Metabolic stress. The probability for pathogens and insect attack increases, because of the lack of available energy to drive the enzymatic/hormones system in the plant. With the addition of an excellent natural organic metabolite like a member of the **Glio** range, the plants energy curve is put back in balance.

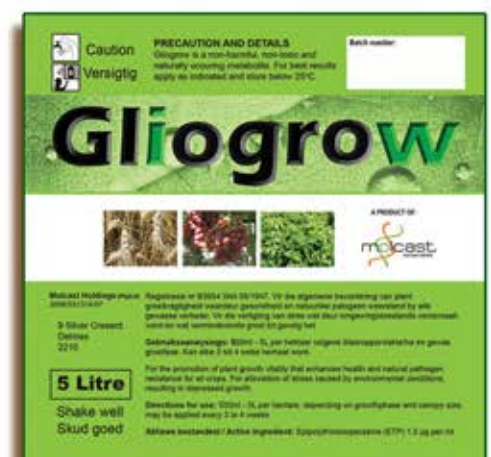
The **Glio** range of unique enzyme products enhance plant promulgation through the enzymatic system to ensure optimal metabolic rates even in conditions of "natural" or external stress factors. This leads to growth vitality that enhances health and natural pathogen resistance for all crops.

Epipolythiodioxperazine (ETP) is a naturally occurring enzyme. Through modern farming techniques and the use of fungicides, the organisms that produce ETP has current populations in the soil that is not enough. For this reason the **Glio** range is added to ensure enough exposure to ETP for a more balanced metabolism and energy curve through the plants growing cycle. This more balanced metabolism has the following biological effect in the plant and can be even more effective with the availability of functional Carbon (-COOH) and Ca:

- increased enzyme activation for metabolic changes and nutrient uptake;
- due to the above mentioned, increase in hormone activity
- continuous regrowth of root hairs (NB for optimal Ca uptake in plants)
- increased concentration of plant sugars/nutrients (Brix)
- longer shelf life due to better balance of nutrients in plant and fruit.
- increase in balance of absesenic acid and increase in plant sap conductivity (EC)
- increased photosynthesis activity
- optimal balance between photosynthesis and respiration

It is applied as foliar in combination with NPK plant nutrients, CO₂, COMPLEX SUPER CA or by itself.

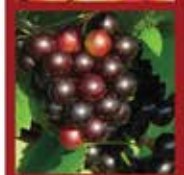
Any of the Glio products can be used in growth programmes or on its own depending on the growth stage of the crop. Different growth programmes for specific crops are available on request.





Apples

- 1 Liter/ha (+ 25 kg white sugar) at bloom.
- 1 Liter/ha three week later.
- 1 Liter/ha with fruit fill.



Sitrus

- 1 Liter/ha (+ 25 kg white sugar) at bloom.
- 1 Liter/ha at three to four week intervals (3x)



Grapes

- 1 Liter/ha (+ 25 kg white sugar) before flower.
- 1 Liter/ha three weeks later.
- 1 Liter/ha at fruit fill.

Mango

- 1 Liter/ha at bloom.
- 1 Liter/ha four weeks after first spray.
- 1 Liter/ha just before fruit fill.



Potatoes

- 1 Liter/ha two weeks after emergence.
- 1 Litre/ha at Bulbset.
- 1 Liter/ha at Flower.

Tomatoes, Cucumbers

(under coverage, open lands and jam tomatoes)

Drench seedlings with 2% solution before transplanting.

- 1 Liter/ha three weeks after transplant, then
- 1 Liter/ha every three weeks until plant gets destroyed.

Paprika, Green Peppers

Drench seedlings with 2% solution before transplanting.

- 1 Litre/ha three weeks after transplant.
- 1 Litre/ha after emergence (Seed planted crops), then
- 1 Liter/ha every 3 weeks.

Onions, Garlic

Drench seedlings with 2% solution before transplanting.

- 1 Liter/ha three weeks after transplant or emergence.
- 1 Liter/ha 3x during growing seeds.

Carrots, Beetroot

- 1 Liter/ha three weeks after emergence.
- 1 Liter/ha four weeks later.
- 1 Liter/ha eight weeks after emergence.



Wheat

Dry land application (Foliar application)

- 1 Liter/ha at tillering
- 1 Liter/ha at flag leaf before booting

(Do not mix with wead killers)

Maize

Split application:

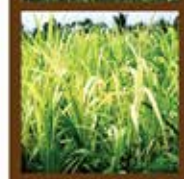
- 1 Liter/ha at six leaf.
- 1 Liter/ha 10 days befor tossle.

Single application (Dryland):

- 1 Liter/ha at six - eight leaf stage

Seed Maize

- 1 Liter/ha at six leaf.
- 1 Liter/ha 10 days befor tossle.



Figs

- 1 Liter/ha at first bloom.
- 1 Liter/ha every four weeks thereafter. (no withholding period)

Pomegranate

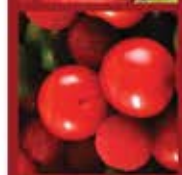
- 1 Liter/ha at first bloom.
- 1 Liter/ha every three weeks thereafter. (no withholding period)

Pecans

- 1 Liter/ha at bloom.
- 1 Liter/ha at fruitset.
- 1 Liter/ha at fruit fill. Compatible with Zn en Ni products and all foliar feeds.

Stone Fruits

- 1 Liter/ha at bloom.
- 1 Liter/ha at fruitset.
- 1 Liter/ha at fruit fill.



Lettuce, Cabbage

Drench seedlings with 2% solution before transplanting.

- 1 Litre/ha three weeks after emergence of plant.
- 1 Liter/ha six weeks after planting.

Onion Seed

- (Drench bulbs in 2% before planting)
- 1 Litre/ha three weeks after planting.
- 1 Liter/ha every four weeks thereafter. (2 applications)
- 1 Liter/ha can be applied when in flower.

Peas

- 1 Litre/ha two weeks after emergence.
- 1 Litre/ha just before flowering.

Sugar beans

Split application:

- 1 Litre/ha three weeks after emergence.
- 1 Litre/ha one week before flowering.

Single application:

- 1 Litre/ha one week before flowering.

Spinach

Drench seedlings with 2% solution before transplanting.

- 1 Liter/ha two weeks after transplant. (directed)
- 1 Litre/ha three weekly thereafter.



Sunflower

Split application:

- 1 Litre/ha at six - eight leaf stage
- 1 Litre/ha just before flowering

Single application:

- 1,25 Liter/ha at six - eight leaf stage



Sorghum

Split application:

- 1 Litre/ha three weeks after turnout
- 1 Litre/ha just before plume

Enkel toediening:

- 1.25 Liter/ha at six - eight leaf stage



Legumes

- 1 Litre/ha early and
- 1 Liter/ha with appearance of flower head

Single application:

- 1,5 Liter/ha just before flowering

(Can be applied with Roundup, Foliar feeds & Insectasides)

Reg.nr. B4808 Act.36/1947

Gliosense

Nurture Nature

A unique solution for all crops... a new era



Gliosense is for the middle to latter part of growth cycle when optimal plant sugar production and photosynthesis is required

Liquid foliar feed containing Epipolythioxperazine (ETP) and micronutrients.

APPLICATION

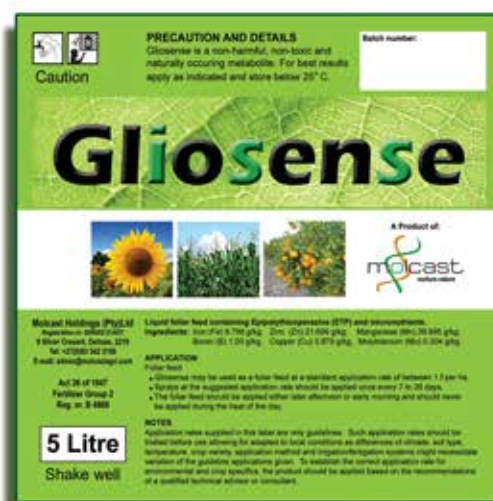
- Gliosense may be used as a foliar feed at a standard application rate of between 1 & 2 l/ha.
- Sprays at the suggested application rate should be applied once every 7 to 28 days, depending on crop.
- The foliar feed should be applied either later afternoon or early morning and should never be applied during the heat of the day.

Active Ingredient:

Epipolythiodioxperazine (ETP) -	1.5 µg/ml
Manganese (Mn)	- 30 g/l
Boron (B)	- 7 g/l
Iron (Fe)	- 9.8 g/l
Copper (Cu)	- 8 g/l
Zinc (Zn)	- 21 g/l



**Proudly South African
State of the art technology
from our own environment.
Intensive testing nationwide**



Gliomax

Reg.nr. K9222 Act.36/1947

Nurture Nature

A unique solution for all crops... a new era

Gliomax is for the early part of the growth cycle where root development and/or regrowth is important.

Gliomax is a non-harmful, non-toxic and naturally occurring metabolite.

Leaf application from early development, even when in flower and before harvest with no withholding period. Can also be applied via drip into the root zone.

It is applied as foliar in combination with NPK plant nutrients, COA, COMPLEX SUPER CA or by itself.

Can be used in growth programmes or on its own depending on the growth stage. Different growth programmes for specific crops are available on request.

Application

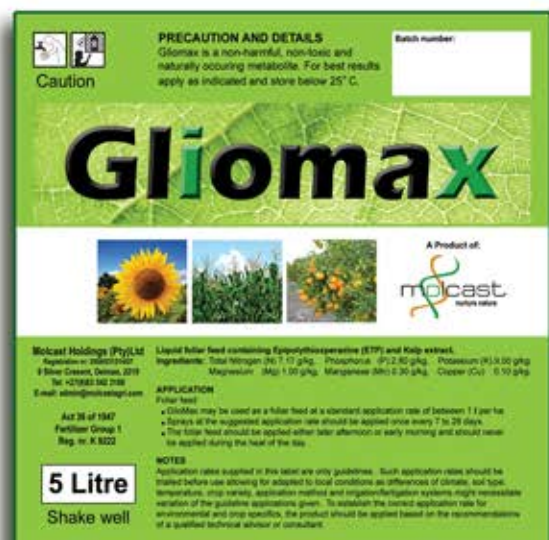
Gliomax may be used as a foliar feed at a standard application rate of between 1 l per ha and 2 l per ha.

Sprays at the suggested application rate should be applied once every 7 to 28 days, depending on crop.

The foliar feed should be applied either later afternoon or early morning and should never be applied during the heat of the day.

Active Ingredient:

ETP - 1.5 µg/ml, Potassium (K) - 9 g/l,
Manganese (Mn) - 0.3 g/l, Copper (Cu) - 0.3 g/l,
Kelp extract.



Wheat lives again after fires

By Dr. Willem Otto.



Augustus 2011 - devastating fires hit North West with huge losses.

The devastating fires in North West last year August has been well known and statistics about losses to cattle, hectares of pasture and field, has been widely published. Large losses on crop residues and feed bales have also been suffered.

The Richter farm in the Grootpan area suffered an extraordinary setback when young wheat (SST 843) which was planted under reduced processing, under an irrigation hub, was also destroyed by the fire.



Shortly after the fire, visitors were stunned by the damage caused by the land. The young growing wheatland was burned to the ground by flames driven by the strong winds.

Harvest waste among the young wheat plants caused the heat of the fire to increase even further.

After such a traumatic event, there was a real speculation regarding any chance that the plants could recover and whether the land had to be cleared. The wheat plants were examined, excavated, examined and listen to several speculated scenarios to make an informed decision.

The circumstances were unique, but the investigation highlighted a few points that changed the situation.

Firstly, the wheat plants were well established and in the early days of tillering. The topsoil was still wet after a previous irrigation-cycle and as part of the production planning the first application of a growth stimulant (Gliogrow™) was already applied. The fire's rapid spread across the land scorched the growth near the topsoil but fortunately the deeper crowns and roots of the majority of plants were not damaged.



A comparison between undamaged wheat plants (left) and burned plants.

After the investigation, it was decided to give nature a chance to show how much life was still in the underground parts of the plants that were left over. The land was irrigated and the plantation was given a chance so that any development could be monitored. After ten days, the land was visited and the investigation team was greeted with new regrowth. Although some flatter plants did not recover due to heat damage, about 70% of the plants and initiated new growth.

A beneficial donation allows a follow-up application of a growth stimulant through the pivot point. It was applied in combination with additional nitrogen fertilization.

The plan was to further stimulate the growth of the plants and to restore a justifiable yield potential so that the seasonality could potentially make economic sense.

Growth promoters are known to stimulate plants under strain conditions, like after hailstorms, as well as improving a plant's resistance and general growth. It could reasonably be assumed that the burned wheat plants would be under strain. Visits during the further course of growth confirmed the beneficial effect of the treatments.

As a result of the lower plant condition, higher weed pressure originated, but it could still be effectively combatted. The wheat cultivar SST 843, a well-known irrigation cultivar, reimbursed with the lower plant condition with good straw formation and greater development.

The crop had to grow and develop from scratch, but although the effective growth rate was shortened, the wheat could be harvested simultaneously with the other wheat plantations. An average yield of 2,55 t / ha was harvested with an exceptionally good grade and grain quality. The savings in fertilizer costs has contributed a large part of the production cost has been recovered. That's why it was economically meaningful to save the planting.

This situation is indicative of the saying that where there is life, there is still hope. After the devastating fires the minds were obviously depressing. However, the recovery and growth that followed in this particular case holds a lesson for everyone.

For further information, please contact the author at willem@nwkc.co.za.

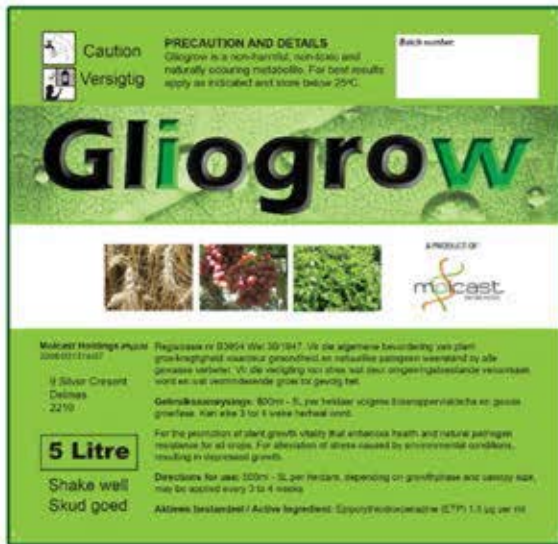


Ten days after the fire and the wheat shows recovery of growth and plant development.



Recovery of growth and plant development during grain filling stage.





Potatoes SA - Trial on Douglas 2012

Repeat	Control Kg/5m	Gloigrow Kg/5m	Difference Kg/ha	Price R/ton	Cost R/ton	Nett value R/ha
1	38.00	38.29				
2	43.75	44.10				
3	42.05	43.30				
4	40.40	42.20				
5	36.95	42.55				
	201.15	210.44				
	44,699.55	46,763.98	2,064.42	R 2,000.00	R 855.00	R 4,128.85

Farming in Christiana

Potato trial - 2013					Three applications of Gliogrow + 5 kg/ha of Complex Calsus 1 L/ha two weeks after emergence 1 L/ha six weeks after emergence 1 L/ha at flowering
Trial Area	Control kg/5m	Gloigrow Kg/5m	Change in yield Kg/5m	% improvement	
A	75.30	85.80	10.50	13.94%	
B	72.62	90.52	17.90	24.65%	
C	75.60	85.00	9.40	12.43%	
Average	74.51	87.11	12.60	16.91%	
	Control T/ha	Gloigrow T/ha	Change in yield T/ha	% improvement	
Yield in ton/ha	82.76	96.76	14.00	16.92%	
Yield ton/ha - 15%	70.35	82.25	11.9	16.92%	

Gliogrow

**Intensive Testing
of all products
Nationwide
using trials and lab**



WORLD FOCUS
1596 (Pty) Ltd

The three best methods known for determining if a plant is healthy is the **BRIX**, **pH** & **Electric Conductivity**.



We use plant sap analysis to analyze these three methods.

BRIX:

The Brix level shows the total dissolved solids in the plant.

The higher the dissolved solids the higher the mineral and the healthier the plant.

If the Brix level is low then the ions have not “complexed” into sugars or proteins. The ideal Brix level is > 12 %.

pH:

This will indicate the acidic level of the plant. A balanced level of nutrients in the leaf of the plant will show an ideal pH level of 6.2 - 6.4.

A lower than ideal pH level will indicate a deficiency in the following minerals:
Calcium, Potassium, Sodium or Magnesium.

A higher than ideal pH level will indicate a deficiency in the following minerals that act in the opposite direction:

Phosphates, Nitrate Nitrogen, Sulfates and trace minerals.

Electric Conductivity:

This can quickly determine the total concentration of Simple ions.



Farming News



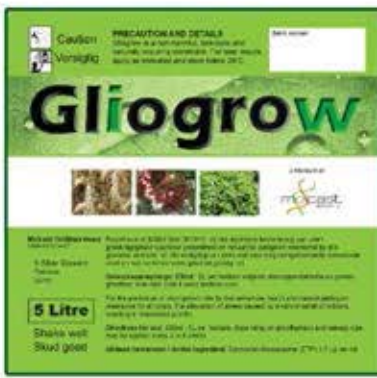
Organic Growth Stimulant for the commercial Agriculture

To produce food in an optimal and sustainable way, in a semi-arid country such as South Africa one has to know and understand the biology of the plant and the soil. For this reason, a new generation growth-stimulant “**Gliogrow™**” was developed. The product is registered under the Act36 and in the market for the past nine years. **Gliogrow™** is registered for the use on all known crops under cultivation in South Africa. The development was done in conjunction with the different universities, **CSIR** and **ARC**. The active ingredient (ETP) in **Gliogrow™** is a metabolite extracted out of a specific South African strain of Trichoderma. The use of Gliogrow on plants give a better enzyme-activation as well as higher plantsap-sugars (Brix), **Gliogrow™** is organic with no toxic effects.

Gliogrow™ is mainly used as foliar spray with a formulation for soil application also available. Uptake and metabolic effects in the plant is microscopically detectable within as little as twenty minutes after foliar application of **Gliogrow™**. With a foliar application of **Gliogrow™** the energy in the plant (BRIX) goes up. This enhanced energy status puts the plant in a position to protect itself against pathogen and insect attacks. The enhanced energy levels also puts the plant in position to handle the daily sub-optimal growing conditions better.

Furthermore, photosynthesis is accelerated with the direct result of increased sugar production and starch formation, improved flowering and fruit formation, higher rate of nutrition uptake with more effective use of nutrients, thereby increasing productivity, better yield and product quality. Trials on different crops have already been done by **World Focus** as well as **ARC** with results listed in the table below.

Yield result of crops after treated with Gliogrow					
Crop	Treatment	Yield (T/ha)	ARC Trial: Maize (2008 - 2009)		Yield (T/ha)
Maize - Delmas	Control	7.603	Potchefstroom	Control	3.024
	Gliogrow	8.981		Gliogrow	4.596
Greenbeans - Delmas	Controle	14.9	Bethlehem	Control	2.093
	Gliogrow	20.4		Gliogrow	2.745
Potatoes - Christiana	Control	70.35	Bothaville	Control	1.683
	Gliogrow	82.25		Gliogrow	3.369
Wheat - Delmas	Control	5.96	Ottosdal	Control	2.865
	Gliogrow	7.31		Gliogrow	4.175



Eragrostis Trial

On the farm of
Mr.Danie Broekman
in Delmas

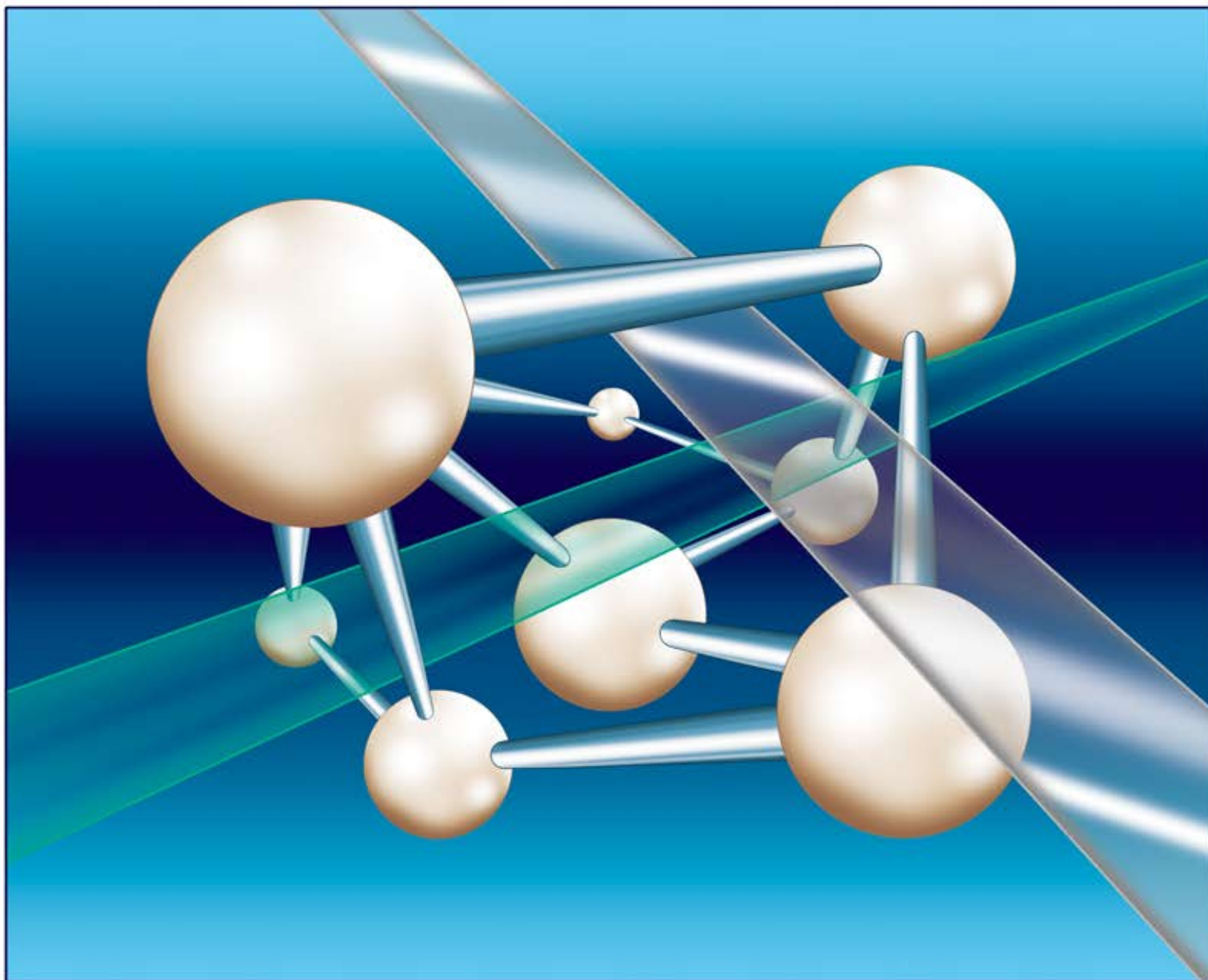


Eragrostis under irrigation - 2014

Gliogrow L/ha				1	1
Micronised Lime Kg/ha	2.5	5.0	7.5	2.5	2.5
DM	59.0	55.0	49.7	47.5	39.5
Protein	3.1	4.1	6.3	5.4	8.0
Sugar	0.0	0.0	0.0	0.4	0.9
Starch	12.0	13.4	10.2	9.8	7.5
ADF	37.4	41.7	36.6	24.4	29.0
NDF	77.2	83.3	75.9	55.6	64.8
Lignin	0.5	2.7	2.1	1.4	1.1
Fat	0.9	1.5	1.8	3.7	2.0
NFC	11.0	7.6	6.0	6.4	12.6
Grass Mass /g	0.1	0.1	0.2	0.2	0.2
Root Mass /g	296.0	300.0	304.0	342.0	



We have developed a range of products, each with it's own unique properties to address specific needs to specific crops



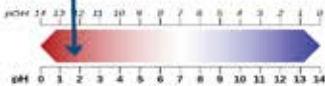
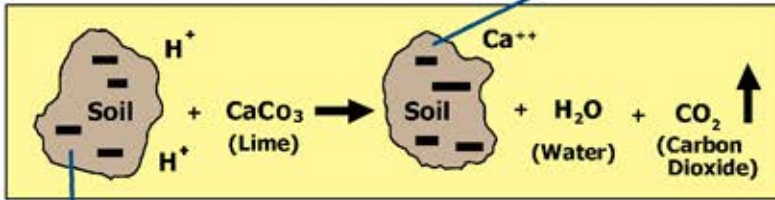
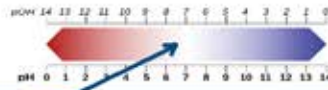
Especially formulated to improve the soil or growth medium, for optimal support of plant nutrients supplied in the Rizosphere, root zone and as a foliar application to ensure optimal support of plant nutrients and a constant energy curve during the production season of plants



Why Lime?

pH

pH is defined as the decimal logarithm of the reciprocal of the hydrogen ion activity in a solution



Why Lime?

CEC

Basic Cation

(Ca^{+2}), (Mg^{+2}), (K^{+1}), (Na^{+1})

acid causing Cation

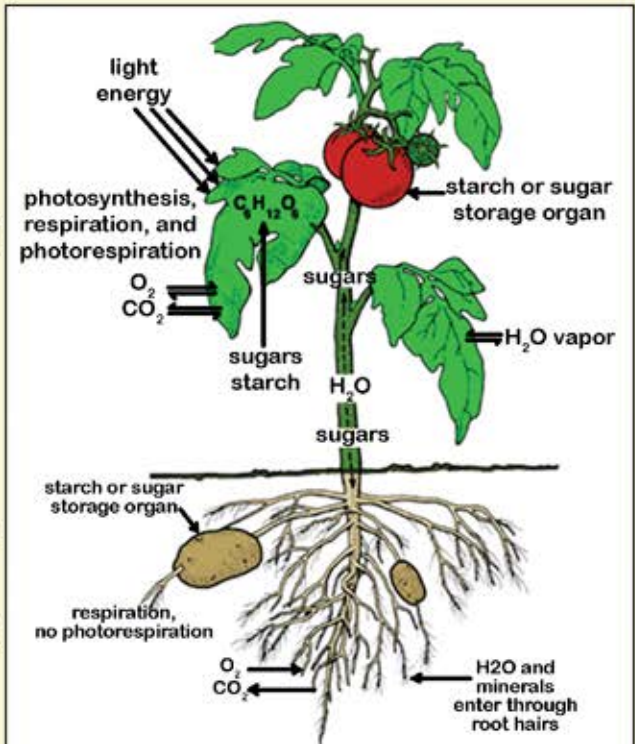
(H^{+1}), (Al^{+3})

acid saturation

Fractional basis Cation exchange capacity.

(Ca^{+2}), (Mg^{+2}), (K^{+1}), (Na^{+1})

Ca:Mg



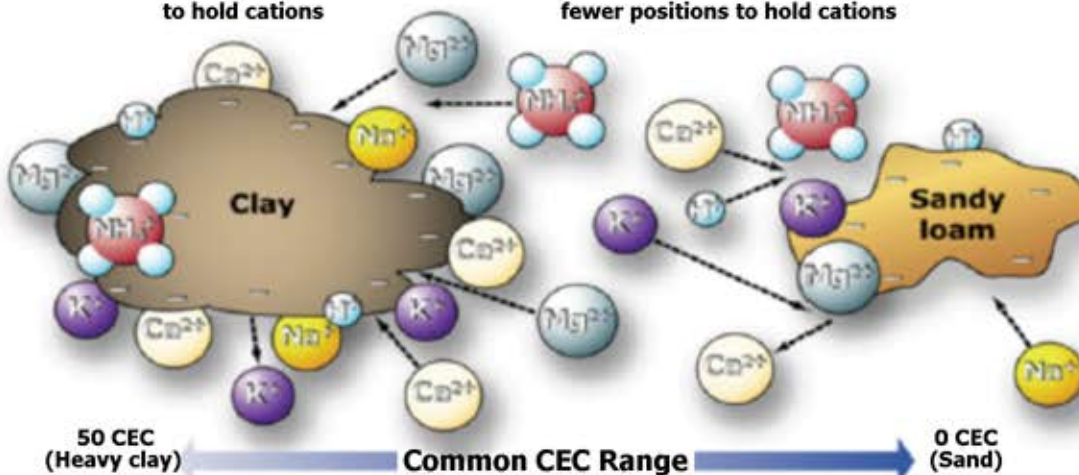
A schematic look at cation exchange

CEC 25

More clay, more positions to hold cations

CEC 5

Low clay content, fewer positions to hold cations



COMPLEX CALSUS

Enriched Micro-fine
Alkaline Calcium
for the use in
suspension
application.

Proudly South African
State of the art technology
from our own environment.
Intensive testing nationwide



Unique Qualities of Complex CalSus

- The diminished partical size has as result a greater reaction surface.
- The smaller partical size has the advantage of a faster reaction time.
- The effect of 5 kg **Complex CalSus** (<10 micron) is equivalent to that of 2000 kg conventional agricultural lime of 0.7 tot 1.2 mm.
- Any type of agricultural or irrigation equipment may be used any time of the year for the application of **Complex CalSus**.
- It can also be applied to any type of soil or growth medium.

Advantages of Micronized Gypsum

- Application is greatly facilitated through the use of a suspension of **Complex CalSus** compared to the conventional method of the application of lime.
- Waste as result of adverse weather conditions is greatly averted.
- **Complex CalSus** may be applied in any type of farming, eg. conventional, "No Till", minimum till, leased land, pastures, before plant and even after emergence.
- Diminished volumes to be handled results in savings as on transport costs, expenditure on time and equipment lay-out.

Frequently Asked Questions


- Q: How is it possible for smaller particals to present a greater surface?
- A: Surface area of 1kg lime with particle size of 1mm (1 000 mikrons) is 325m² v/s 1kg of lime with a particle size of 5 mikrons with a surface area of 65 000m²
- Q: **Complex CalSus** is more expensive per kg than conventional lime but is averred that it is more economical?
- A: The considerable lessened volumes that are involved in the application of **Complex CalSus** results in savings on transport, labour, specialized equipment such as irrigation and also the elimination of waste through adverse weather conditions, even though a yearly application might be necessary.
- Q: How can I be sure that the prescribed application of **Complex CalSus** will result in the same or better outcome than my conventional liming programme?
- A: Your **Complex CalSus** requirements can be ascertained and applied on the same basis as for your normal fertilizer needs.

Blue Ocean
Agricc

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Complex CalSus

Complex CalSus is an alkaline source of Calcium for the increase of Calcium concentration in the treated area.



Active Ingredients:	M/M	Act 36/1947
Calcium (Ca)	400 g/kg	Fertilizers Group 2
Magnesium (Mg)	30 g/kg	Reg. No. B4682
Organic components	30 g/kg	

APPLICATION:
Drench application of suspended product.

- Standard application rate is 4 – 12 kg/ha.
- Make a suspension of Complex Ca in a convenient volume of water to ensure good coverage, and drench onto the soil.

Notes:
Application rates supplied in this label are only guidelines. Such application rates should be trialled before use allowing for adapted to local conditions as differences of climate, soil type, temperature, crop variety, application method and irrigation/fertigation systems might necessitate variation of the guideline applications given. To establish the correct application rate for environmental and crop specifics, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

A Product of
Blue Ocean Agri cc 25 Kg.

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Tel: +27(0)83 542 3106
E-mail: admin@molcastagri.com

Reg. Nr. 2005/158962/23

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COMPLEX CALSUL

**Enriched Micro-fine
Alkaline Calcium
for the use in
suspension
application.**

**Proudly South African
State of the art technology
from our own environment.
Intensive testing nationwide**



Unique Qualities of Complex Calsul

- The diminished partical size has as result a greater reaction surface.
- The smaller partical size has the advantage of a faster reaction time.
- The effect of 5 kg **Complex Calsul** (<10 micron) is equivalent to that of 2000 kg conventional agricultural lime of 0.7 tot 1.2 mm.
- Any type of agricultural or irrigation equipment may be used any time of the year for the application of **Complex Calsul**.
- It can also be applied to any type of soil or growth medium.

Advantages of Micronized Gypsum

- Application is greatly facilitated through the use of a suspension of **Complex Calsul** compared to the conventional method of the application of lime.
- Waste as result of adverse weather conditions is greatly averted.
- **Complex Calsul** may be applied in any type of farming, eg. conventional, "No Till", minimum till, leased land, pastures, before plant and even after emergence
- Diminished volumes to be handled results in savings as on transport costs, expenditure on time and equipment lay-out.

Frequently Asked Questions


- Q: How is it possible for smaller particals to present a greater surface?
- A: Surface area of 1kg lime with particle size of 1mm (1 000 mikrons) is 325m² v/s 1kg of lime with a particle size of 5 mikrons with a surface area of 65 000m²
- Q: **Complex Calsul** is more expensive per kg than convensional lime but is averred that it is more economical?
- A: The considerable lessened volumes that are involved in the application of **Complex Calsul** results in savings on transport, labour, specialized equipment such as irrigation and also the elimination of waste through adverse weather conditions, even though a yearly application might be necessary.
- Q: How can I be sure that the prescribed application of **Complex Calsul** will result in the same or better outcome than my convensional liming programme?
- A: Your **Complex Calsul** requirements can be ascertained and applied on the same basis as for your normal fertilizer needs.

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Agri cc

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Complex Calsul

A micro fine source for the increase of the Calcium and Sulphate levels in the treated zone.



Active Ingredients M/M
Calcium (Ca) - 230 g/kg
Sulphur (S) - 140 g/kg
Organic components 30g/kg

Act 36/1947
Fertilizers Group 2
Reg. No. B4990

APPLICATION:
Drench application of suspended product.
• Standard application rate is 4 – 10 kg/ha.
• Make a suspension of **Complex Calsul** in a convenient volume of water to ensure coverage of the intended zone. Can be applied by any agricultural spraying or irrigation equipment, e.g. crop sprayers, drip, micro and any overhead irrigation.

Notes:
Application rates supplied on this label are to be used as guidelines only. Such application rates can differ for allowing for adaptation to local conditions, e.g. climate, soil type, temperature and crop variety. Application method and irrigation/fertigation systems might necessitate variation of the guideline applications given. To establish the correct application rate for environmental and crop specific, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

A Product of
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Reg. Nr. 2005/159962/23

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E-mail: admin@molcastagri.com

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CCM

Enriched Micro-fine Alkaline Calcium and Magnesium for the use in suspension application.

Proudly South African State of the art technology from our own environment. Intensive testing nationwide



Complex Calcium Magnesium

Unique Qualities of CCM

- The diminished partical size has as result a greater reaction surface.
- The smaller partical size has the advantage of a faster reaction time.
- The effect of 5 kg **CCM** (<10 micron) is equivalent to that of 2000 kg conventional agricultural lime of 0.7 tot 1.2 mm.
- Any type of agricultural or irrigation equipment may be used any time of the year for the application of **CCM**.
- It can also be applied to any type of soil or growth medium.

Advantages of Micronized Gypsum

- Application is greatly facilitated through the use of a suspension of **CCM** compared to the conventional method of the application of lime.
- Waste as result of adverse weather conditions is greatly averted.
- **CCM** may be applied in any type of farming, eg. conventional, "No Till", minimum till, leased land, pastures, before plant and even after emergence.
- Diminished volumes to be handled results in savings as on transport costs, expenditure on time and equipment lay-out.

Frequently Asked Questions

- Q: How is it possible for smaller particals to present a greater surface?
 A: Surface area of 1kg lime with particle size of 1mm (1 000 mikrons) is 325m² v/s 1kg of lime with a particle size of 5 mikrons with a surface area of 65 000m²
- Q: **CCM** is more expensive per kg than convensional lime but is averred that it is more economical?
 A: The considerable lessened volumes that are involved in the application of **CCM** results in savings on transport, labour, specialized equipment such as irrigation and also the elimination of waste through adverse weather conditions, even though a yearly application might be necessary.
- Q: How can I be sure that the prescribed application of **CCM** will result in the same or better outcome than my convensional liming programme?
 A: Your **CCM** requirements can be ascertained and applied on the same basis as for your normal fertilizer needs.

Active Ingredients

Calcium (Ca)190 g/kg
Magnesium (Mg)110 g/kg
Organic components 20 g/kg



CCM BOOA

CCM is an alkaline source to increase the Calcium and Magnesium concentrations in the treated area.

Active Ingredients	M/K	Act 36/1947
Calcium (Ca)	190 g/kg	Fertilizers Group 2
Magnesium (Mg)	110 g/kg	Reg. No. B4683
Organic components	20 g/kg	

APPLICATION:
 Drench application of suspended product
 • Standard application rate is 4 – 12 kg/ha.
 • Make a suspension of CCM in a convenient volume of water to ensure good coverage, and drench onto the soil.

Notes:
 Application rates supplied in this label are only guidelines. Such application rates should be trialled before use allowing for adapted to local conditions as differences of climate, soil type, temperature, crop variety, application method and irrigation/fertiligation systems might necessitate variation of the guideline applications given. To establish the correct application rate for environmental and crop specifics, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

A Product of
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 Tel: +27(0)33 542 3366
 Reg. No. 2005/158962/23 E-mail: admin@blueoceanagri.com

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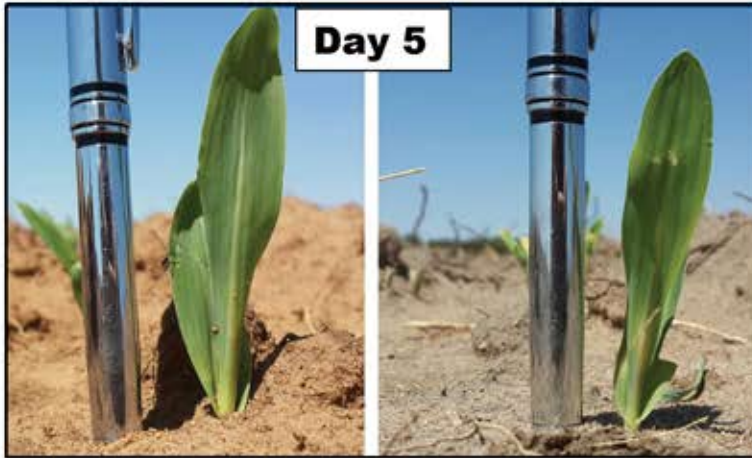
Silage Maize - Schweizer Reneke



5 kg CalSul




Day 3

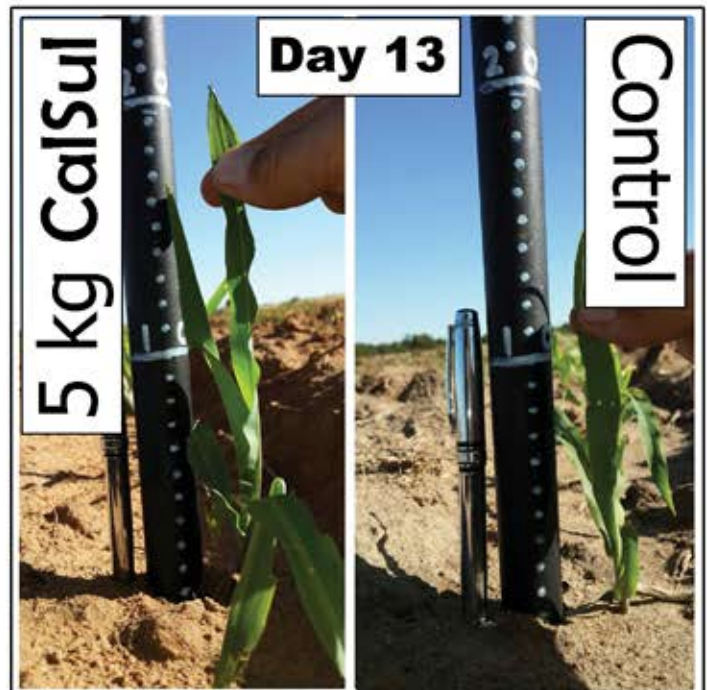


Day 5

Control



Wealth creation through innovative technology. Wealth creation through innovative technology.
Complex CalSul
 A micro fine source for the increase of the Calcium and Sulphate levels in the treated zone.

 Active Ingredients: 100% Calcium (Ca) - 33% S, 10% Sulphur (S) - 24% S, 10% Calcium sulphate (CaSO₄)
 Application: Direct application of suspended product. - 100ml/litre/ha rate. (4 - 10 kg/ha).
 Notes: - Make a slurry of 100ml of Complex CalSul in a convenient volume of water to ensure coverage of the treated area. Can be applied by any agriculture sprayer or irrigation equipment, e.g. crop sprayer, etc, to avoid any chemical residue.
 A Product of **Blue Ocean Agri cc 25 Kg.**
 P. Nene C. van der Merwe, 2014
 Tel: +27(0)21 543 3166
 Email: info@blueoceanagri.co.za

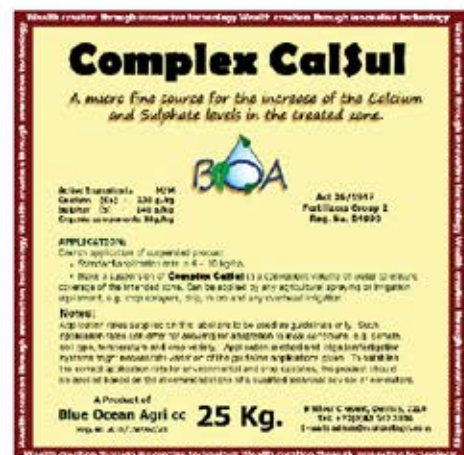
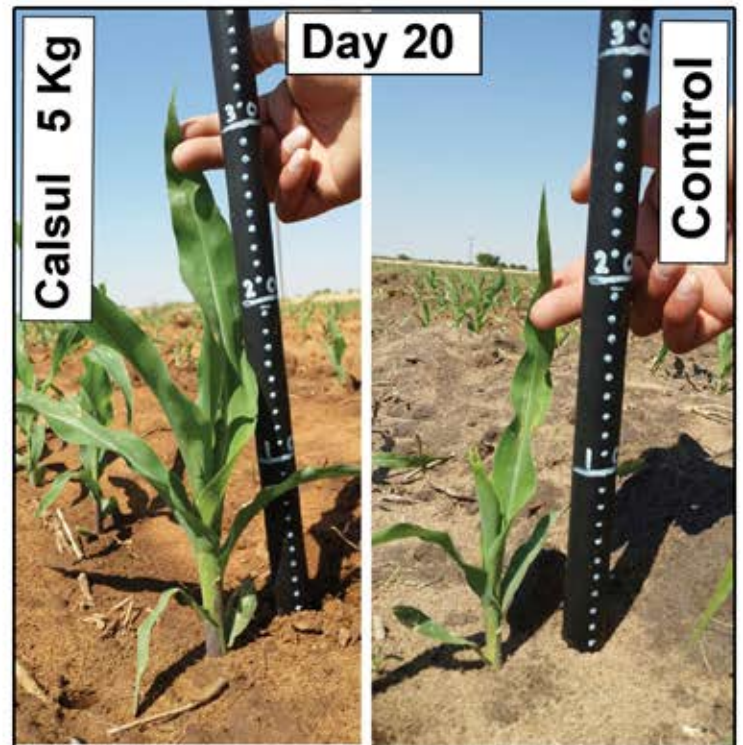
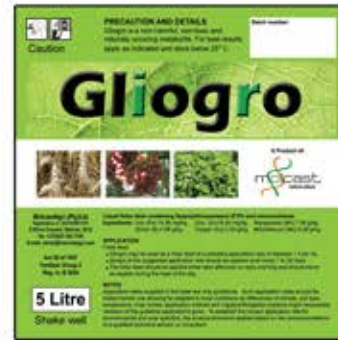
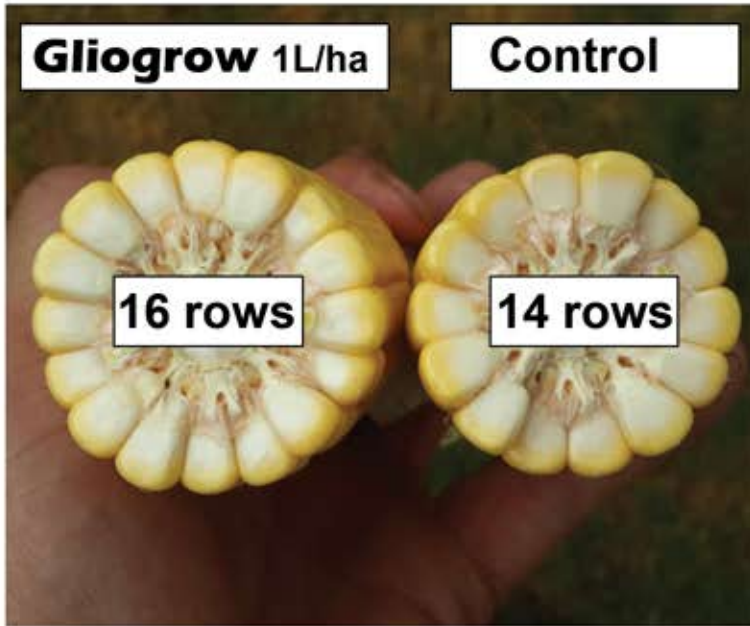


Day 13

5 kg CalSul

Control

Silage Maize - Schweizer Reneke



Groblersdal Strip Trials

Soil analysis done by Omnia




Area number	Green Beans		Wheat	
	NE 1	NE 2	PK 2 A	PK 1 A
	CaSO4	Control	CaSO4	Control
pH	5.80	5.10	5.70	5.20
S	56.00	33.00	43.00	34.00
P	35.00	21.00	33.00	40.00
K	109.00	135.00	388.00	423.00
K %	8.00	8.00	7.00	8.00
Ca	468.00	564.00	1880.00	1800.00
Ca %	71.00	67.00	69.00	67.00
Mg	72.00	105.00	370.00	372.00
Mg %	18.00	21.00	22.00	23.00
Na	24.00	37.00	47.00	84.00
Na %	3.00	4.00	1.00	3.00
EKUK	3.30	4.20	13.60	13.50
Ca/Mg	4.00	3.30	3.10	3.00
Mg/K	2.10	2.50	3.10	2.80
Ca + Mg /K	11.00	11.00	13.00	11.00

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Complex Calsul

A micro fine source for the increase of the Calcium and Sulphate levels in the treated zone.



Act 36/1947
Fertilizers Group 2
Reg. No. 84990

Active Ingredients: N/A
Calcium (Ca) - 230 g/kg
Sulphur (S) - 149 g/kg
Organic components 30g/kg

APPLICATION:
Drench application of suspended product
• Standard application rate is 4 - 10 l/ha.
• Make a suspension of **Complex Calsul** in a convenient volume of water to ensure coverage of the intended zone. Can be applied by any agricultural spraying or irrigation equipment, e.g. crop sprayers, drip, micro and any overhead irrigation.

Notes:
Application rates supplied on this label are to be used as guidelines only. Such application rates can differ for allowing for adaptation to local conditions, e.g. climate, soil type, temperature and crop variety. Application method and irrigation/fertilization systems might necessitate variation of the guideline applications given. To establish the correct application rate for environmental and crop specifics, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

A Product of
Blue Ocean Agri cc 25 Kg.
Reg. No. 2005/10862/23

9 Silver Crescent, Delmas, 2310
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Notes:

1. PH in both trials increased. (reaction time 9 weeks)
2. Ca/Mg ratio increased.
3. Na decreased.

NE1 and NE2: Trials done at Terblanche Boerdery
Groblersdal Crop: Green Peas irrigation.

NE1: Sprayed with 5 Kg/ha CaCO₃
NE2: Control

PK 1 A and PK 2 A: Trials done at Dewagendrift Boerdery
Groblersdal Crop: Wheat irrigation.

PK 1 A: Control.
PK 2 A: Sprayed with 10 Kg/ha CaCO₃



Pionne Study Group (Young Farmers)

Soil analysis test - Delmas

1. Soil analysis: Before planting and after harvesting.
2. Sample method: Precise method.
3. Crop: Wheat.
4. Plants: 40,000
5. Microfine calcite lime applied at 10 Kg/ha with 200 liter water/ha .
6. Application: 4 leaf stage with a wide boom sprayer.



Before/After harvest	Before	After	Before	After	Before	After	Before	After	Before	After
Reference	ST-009	009 B	ST-010	0010 B	ST-011	001 B	ST-012	0012 B	ST-013	0013B
pH (KCl)	4.25	4.71	4.12	4.37	3.98	3.94	4.74	4.98	4.06	4.34
PBRAY1	9.00	21.00	9.00	6.00	7.00	8.00	11.00	5.00	13.00	7.00
K	176.00	184.00	117.00	108.00	133.00	100.00	208.00	122.00	33.00	128.00
Na	8.00	4.00	8.00	4.00	9.00	5.00	7.00	5.00	3.00	4.00
Ca	716.00	1011.00	705.00	918.00	553.00	607.00	698.00	1030.00	183.00	816.00
Mg	100.00	129.00	107.00	138.00	74.00	80.00	113.00	135.00	14.00	108.00
Exchangeable Acid	0.10	0.00	0.15	0.11	0.26	0.66	0.00	0.00	0.21	0.13
% Ca	71.90	76.60	72.10	74.90	68.80	65.60	70.10	78.10	68.70	74.90
% Mg	16.40	16.00	18.00	18.40	15.10	14.20	18.60	16.80	8.50	16.30
% K	9.00	7.10	6.10	4.50	8.50	5.50	10.70	4.70	6.30	6.00
% Na	0.70	0.30	0.70	0.30	1.00	0.40	0.60	0.30	0.90	0.30
Acid Saturation	1.90	0.00	3.10	1.80	6.60	14.30	0.00	0.00	15.60	2.50
Ca:Mg	4.40	4.80	4.00	4.10	4.50	4.60	3.80	4.60	8.00	4.60
(Ca+Mg)/K	9.80	13.00	14.80	20.60	9.90	14.50	8.30	20.10	12.30	15.20
Mg:K	1.80	2.20	2.90	4.10	1.80	2.60	1.70	3.60	1.40	2.70
S-Value	4.90	6.60	4.70	6.00	3.80	4.00	5.00	6.60	1.10	5.30
Na:K	0.10	0.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
CEC	5.00	6.60	4.90	6.10	4.00	4.60	5.00	6.60	1.30	5.40
Digtheid	1.05	1.10	1.06	1.15	1.04	1.16	10.16	1.13	1.04	1.18
S	17.96	13.37	16.65	13.73	12.49	15.47	11.98	13.19	1.93	13.22

	Groen Bone		Koring	
Landnummer:	NE 1	NE 2	PK 2 A	PK 1 A
	CaSO4	Kontrole	CaSO4	Kontrole
pH	5.80	5.10	5.70	5.20
S	56.00	33.00	43.00	34.00
P	35.00	21.00	33.00	40.00
K	109.00	135.00	388.00	423.00
K %	8.00	8.00	7.00	8.00
Ca	468.00	564.00	1880.00	1800.00
Ca %	71.00	67.00	69.00	67.00
Mg	72.00	105.00	370.00	372.00
Mg %	18.00	21.00	22.00	23.00
Na	24.00	37.00	47.00	84.00
Na %	3.00	4.00	1.00	3.00
EKUK	3.30	4.20	13.60	13.50
Ca/Mg	4.00	3.30	3.10	3.00
Mg/K	2.10	2.50	3.10	2.80
Ca + Mg /K	11.00	11.00	13.00	11.00

NE 1 and NE 2: Trials done at Terblanche Boerdery Groblersdal:
Crops: Green Peas under irrigation.

NE 1: Sprayed wit 5 Kg/ha CaCO₃ and 1.5 liter/ha COA Organic Sure plus normal fertilizing and farming practice followed.

NE 2: Normal fertilizing and farming practice followed.

PK 1 A: Trials done at Dewagendrift Boerdery - Groblersdal
Crops: Wheat under irrigation.

PK 1 A: Normal fertilizing and farming practice followed.


PK 2 A: Sprayed with 10 Kg/ha CaCO₃ plus 2 liter/ha COA Organic Sure plus normal fertilizing and farming practice followed.

1. The pH in both trials were significantly higher with a reaction time of 9 weeks.
2. Ca/Mg ratio had improved.
3. Na⁺ had reduced significantly.

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Complex Cal\$ul

A micro fine source for the increase of the Calcium and Sulphate levels in the treated zone.



Active Ingredients: **M/N Calcium (Ca) - 256 g/kg**
 Sulphate (S) - 240 g/kg
 Organic components 33g/kg

Art. No. 19917
 Fertilizers Group 2
 Reg. No. 01992

APPLICATION:
 Direct application of suspended product.
 • Standard application rate: 4 - 10 kg/ha.
 • Note: 5 buckets of **Complex Cal\$ul** in a convenient volume of water to ensure coverage of the treated zone. Can be applied by any agricultural spraying or irrigation equipment, e.g. crop sprayer, drip, micro and any overhead irrigation.

Notes:
 Application rates applied on this label are to be used as guidelines only. Such application rates can differ for allowing for adaptation to local conditions, e.g. climate, soil type, temperature and crop variety. Application method and irrigation/fertilizer systems may necessitate variation of the guideline applications given. To establish the correct application rate for environmental and crop specific, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

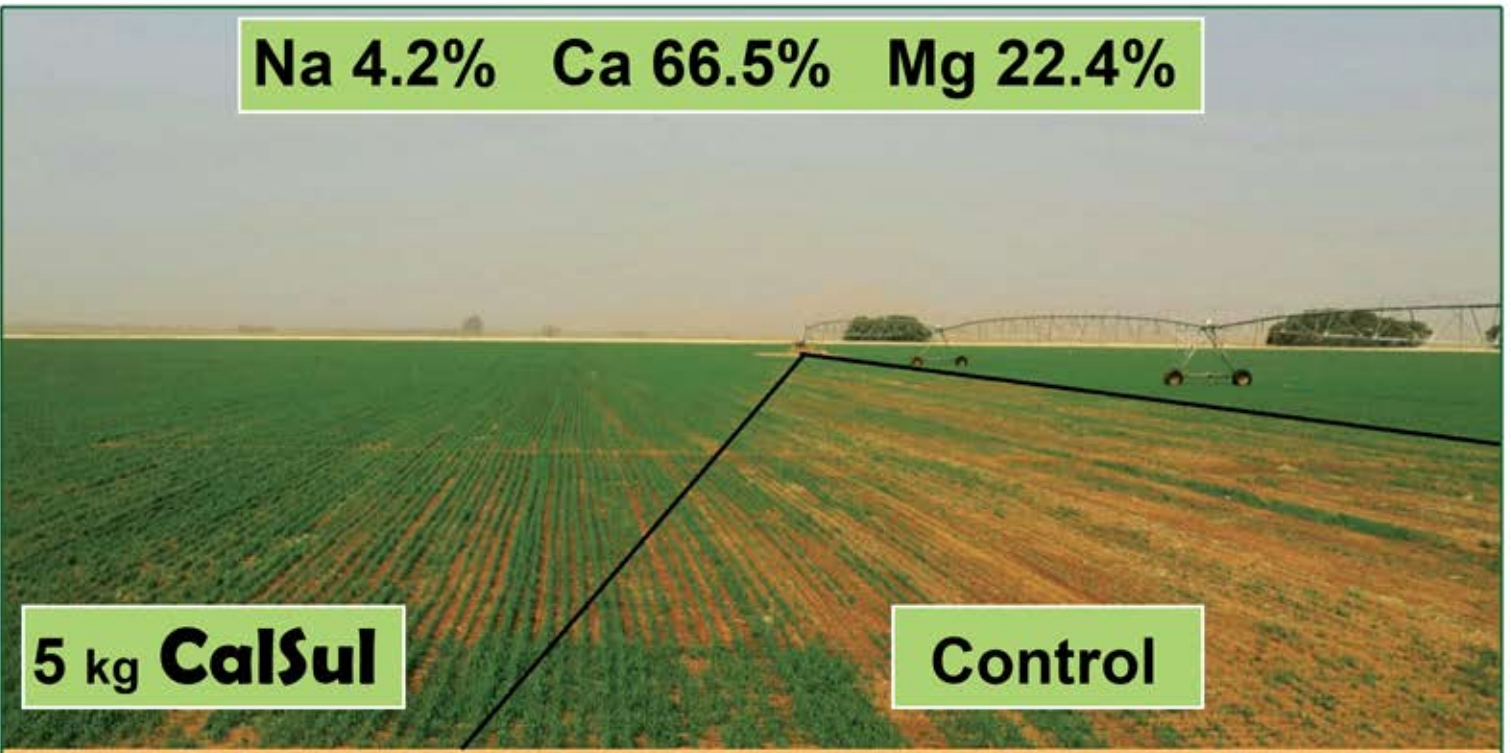
A Product of **Blue Ocean Agri cc 25 Kg.**
 3 Miro Street, Durban, 3218
 Tel: +27(0)31 942 3198
 E-mail: info@blueoceanagri.co.za

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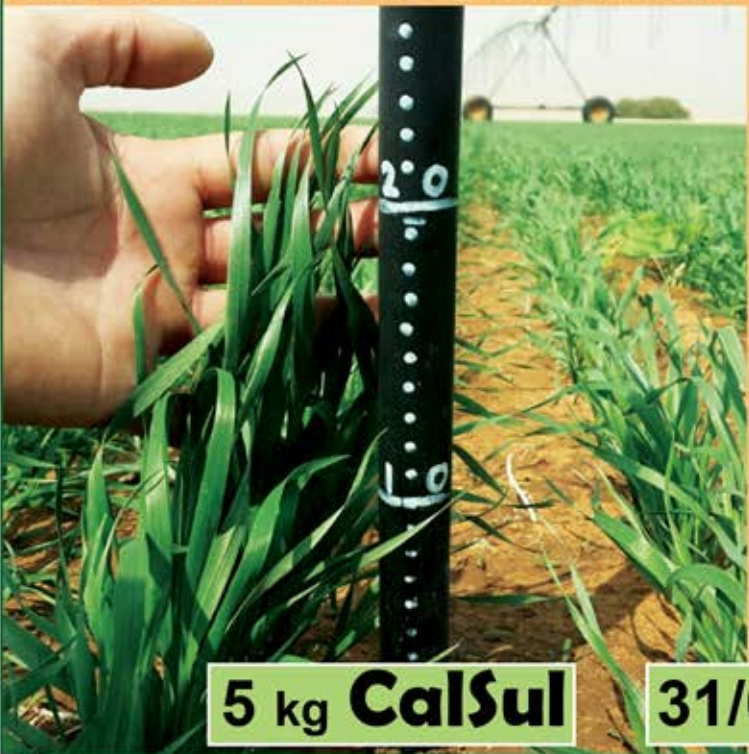
Wheat - Vaalharts

Na 4.2% Ca 66.5% Mg 22.4%



5 kg Cal\$ul

Control



5 kg Cal\$ul



31/08/2015

Control

Inyati Powder



Inyati Powder is a revolutionary acidifying agent/buffer for use in spray water for cultivation of crops.

Proudly South African State of the art technology from our own environment. Intensive testing nationwide

The following attributes make the product unique:



- **In powder form and formulated especially to address bicarbonates in solutions.**
- **Eliminates the transport of large volumes of water.**
- **Can be used for all spray applications of crop protection and nutrition that require a low pH.**
- **Especially effective with glyphosate as the pH must be as close as possible to 4 since it is a derivative of phosphoric acid. For this reason all divalent cations should be effectively removed from the solution to keep the anionic phosphate portion of the glyphosate active. This ensures optimal efficiency of the active ingredient used.**

It is compatible with all Blue Ocean Agri's Complex and COA formulations.


Dosage: 125g - 2000g/1000 lt spray/fertigation water.

Pack size: 500g, 1kg, 5kg

Active Ingredients:

Nitrogen (N)	144.7 g/kg
Potassium (K)	13.86 g/kg
Sulphur (S)	2.04 g/kg





Inyati Powder

Nitrogen source for foliar application

Inyati powder is an acidic source of nitrogen to be used as a foliar feed.

Ingredients	M/M	Act 36/1947
Nitrogen (N)	144.70 g/kg	Fertilizers Group 1
Potassium (K)	13.86 g/kg	Reg. No. K9220
Sulfur (S)	2.04 g/kg	

APPLICATION - Foliar Feed:

- Inyati powder may be used as a foliar feed at a standard application rate of between 50 and 200 g per 100 l water.
- Sprays at the suggested application rate should be applied once every 7 to 28 days.
- The foliar feed should be applied either later afternoon or early morning and should never be applied during the heat of the day.
- The addition of a good quality wetting agent is advised with sprays of Inyati powder.
- Do not mix Inyati powder with sulphate or calcium containing products.

NOTES

Application rates supplied in this label are only guidelines. Such application rates should be trialled before use allowing for adapted to local conditions as differences of climate, soil type, temperature, crop variety, application method and irrigation/fertigation systems might necessitate variation of the guideline applications given. To establish the correct application rate for environmental and crop specific, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

A Product of
Blue Ocean Agri cc

1 Kg

Registration Number 2005/158962/23

5 Silver Crescent, Delmas, South Africa. 2210
Tel: +27(0)83 542 3106
E-mail: admin@molcastagri.com



COA FERTIGATION

A unique combination of specifically the humic and fulvic compound ratio for soil/growth medium application

Especially formulated for optimal support of plant nutrients supplied in the root zone

APPLICATION

COA Fertigation - Use mainly as a soil application but may also be used in fertigation at a standard application rate of between 1 - 8ℓ /ha. Application at the suggested rate should be applied as per a specific crop programme.

Can be mixed with NPK Fertilizer to enhance bio-availability. Can also be used in combination with **Complex Calsul, ComplexCalsus, CCM** and **SuperCa**.
(World Focus Products)

INGREDIENTS

Nitrogen (N)..... 56 g/kg
Sulphur (S)..... 25 g/kg
Organic acids;
Amino acids & enzymes.....SG = 1,1

Act 36/1947
Fertilizer Group 2
Reg.No. B5089

Blue Ocean
Agrivcc

COA FERTIGATION
A unique combination of specifically the humic and fulvic compound ratio for soil/growth medium application.
Act 36/1947 Fertilizer Group 2, Reg.No. B5089

INGREDIENTS
Nitrogen (N)..... 56 g/kg N
Sulphur (S)..... 25 g/kg
Organic acids; amino acids & enzymes..... SG = 1,1

APPLICATION
COA Fertigation may be used in fertigation at a standard application rate of between 1 - 8ℓ /ha. Application at the suggested rate should be applied as per a specific crop programme.
Can be mixed with NPK Fertilizer to enhance bio-availability.
Can be used in combination with **Complex Calsul, ComplexCalsus, CCM** and **SuperCa**.

NOTES
Application rates supplied in this label are only guidelines.
To establish the correct application rate for environmental and crop specific, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

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COMPLEX ROOT

A unique combination of organic acids, amino acids and enzymes for the promotion of healthy roots, and vigorous root growth in seedlings, young plants and perennials.

APPLICATION

Complex Root may be used as fertigation at a standard application rate of between 1-4 l/ha. Application at the suggested rate should be applied as per a specific crop programme, specific soil type and soil condition.

Complex Root can be used in combination with *Complex Calsul*, *Complex Calsus*, *CCM* and *SuperCa*.

INGREDIENTS

Manganese (Mn).....1 g/l
Boron (B).....2 g/l
Organic acids;
Amino acids & enzymes.....SG=1,2

Act 36/1947
Fertilizer Group 2
Reg.No. B5089

Blue Ocean
Agrice



**COMPLEX
ROOT**

A unique combination of organic acids, amino acids and enzymes for the promotion of healthy roots, and vigorous root growth in seedlings, young plants and perennials.
Act 36/1947 Fertilizer Group 2, Reg.No. B5089

INGREDIENTS
Manganese (Mn).....1 g/l
Boron (B).....2 g/l
Organic acids; amino acids & enzymes.....SG=1,2

APPLICATION
Complex Root may be used in fertigation at a standard application rate of between 1-4 l/ha. Application at the suggested rate should be applied as per a specific crop programme.
Complex Root can be used in combination with *Complex Calsul*, *Complex Calsus*, *CCM* and *SuperCa*.

NOTES
Application rates supplied in this label are only guidelines. To establish the correct application rate for environmental and crop specific, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

Blue Ocean

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COA FOLIAR

A unique combination of specifically a humic and fulvic compound ratio for optimal support of plant nutrients applied as foliar feed.

Act 36/1947 Fertilizer Group 2. Reg.No. B5090

Active Ingredients

Nitrogen (N).....21 g/kg
Sulphur (S)..... 2 g/kg
Organic acids; amino acids & enzymes.....SG = 1,1

Application

COA Foliar may be used in irrigation or agricultural spraying at a standard application rate of between 100-400ml/100l of water or 1-5 l/ha. Application at the suggested rate should be applied as per a specific crop programme.

Can be used in combination with COA Complex-range, Glio-range or any other water-soluble NPK nutrient.

COA Foliar will enhance the effectivity of any spray it is sprayed with.



COMPLEX SUPER B

A unique Boron plant nutrient blend specifically formulated to prevent and correct Boron deficiencies in crops that can have adverse effects on growth and production

Act 36/1947 Fertilizer Group 2. Reg.No. B4999

Active Ingredients

Boron (B).....59g per kg.
Organic acids; amino acids & enzymes.....SG = 1,2.

Application

Complex Super B may be used in fertigation at a standard application rate of between 1-3l / ha. and in foliar application at a rate of between 100-250ml per 100l water. Application at the suggested rate should be applied as per a specific crop programme.

Complex SUPER B can be used in combination with Complex Calsul, Complex Calsus, CCM and SuperCa.



Complex SuperK

A unique K plant nutrient blend specifically formulated to prevent and correct K deficiencies in crops that can have adverse effects on growth and production.

Act 36/1947 Fertilizer Group 2. Reg. no. K9900

Active Ingredients

Potassium (K).....89 g/kg
 Nitrogen (N)..... 2 g/kg
 Organic acids; amino acids & enzymes.....SG=1,2

Application

Complex SuperK may be used in fertigation at a standard application rate of between 1-4l/ha and in foliar application at a rate of between 150-400ml per 100l water. Application at the suggested rate should be applied as per a specific crop programme.

Complex SuperK can be used in combination with Complex Calsul, Complex Calsus, CCM and SuperCa.



COMPLEX SugarRush

A unique combination of Organic acids, Amino acids and Enzymes for the promotion of vigorous flowering and optimal fruiting in annuals and perennials.

Act 36/1947 Fertilizer Group 2. Reg.No. B4999

Active Ingredients

Boron (B).....22g per kg
 Manganese (Mn).....3g per Kg
 Organic acids; amino acids & enzymes.....SG=1,2

Application

Complex SugarRush may be used in fertigation at a standard application rate of between 2-4l / ha and in foliar application at a rate of between 150 - 350ml per 100l water per ha. Application at the suggested rate should be applied as per a specific crop programme.

Complex SugarRush can be used in combination with Complex Calsul, Complex Calsus, CCM and SuperCa.



Complex SuperCa



Complex SuperCa is an immediate plant available source of Calcium used either as a foliar feed or in fertigation.

Active Ingredients

Calcium (Ca).....70 g/kg
Nitrogen (N).....45 g/kg
Organic acids; amino acids & enzymes.....SG = 1,3

Act 36/1947.
Fertilizers Group 2
Reg. No. B 4684

Application

Foliar feed

Complex SuperCa may be used as a foliar feed at a standard application rate of between 250 to 400 ml per 100 l.

Sprays at the suggested application rate should be applied once every 7 to 14 days.

The foliar feed should be applied either later afternoon or early morning and should never be applied during the heat of the day.

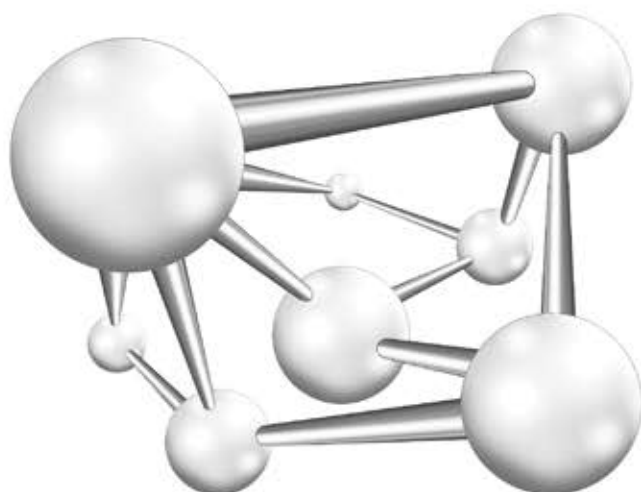
Fertigation

Complex SuperCa may be used continuously in fertigation at a standard application rate of between 2 to 6 l per ha. As foliar feed in open field - 2 to 4 l/ha as needed.

Do not, under any circumstance, mix Complex Super Ca into any concentration solution with phosphate or sulphate containing products, as precipitation might occur.

Notes:

To establish the correct application rate for environmental and crop specifics, the product should be applied based on the recommendations of a qualified technical advisor or consultant. Application rates might be adapted to local conditions as differences of climate, soil type, temperature, crop variety, application method and irrigation/fertigation systems might necessitate variation of the guideline applications given.



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Complex SuperCa

Complex SuperCa is an immediate plant available source of Calcium used either as a foliar feed or in fertigation.

Ingredients	M/M
Calcium (Ca)	70 g/kg
Nitrogen (N)	45 g/kg
Amino and Organic acids	



Act 36/1947
Fertilizers Group 2
Reg. No. B 4684

APPLICATION:

Foliar feed
Complex Super Ca may be used as a foliar feed at a standard application rate of between 250 to 400 ml per 100 L.
Sprays at the suggested application rate should be applied once every 7 to 14 days.
The foliar feed should be applied either later afternoon or early morning and should never be applied during the heat of the day.

Fertigation
Complex SuperCa may be used continuously in fertigation at a standard application rate of between 2 to 6 l per ha.
Do not, under any circumstance, mix Complex Super Ca into any concentration solution with phosphate or sulphate containing products, as precipitation might occur.

Notes:
Application rates supplied in this label are only guidelines. Such application rates should be trialled before use allowing for adapted to local conditions as differences of climate, soil type, temperature, crop variety, application method and irrigation/fertigation systems might necessitate variation of the guideline applications given. To establish the correct application rate for environmental and crop specifics, the product should be applied based on the recommendations of a qualified technical advisor or consultant.

A Product of
Blue Ocean Agri cc 25 l
Registration Number 2005/150962/23

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E-mail: admin@molcastagri.com

Wealth creation through innovative technology Wealth creation through innovative technology

30 Tonnes of Microfine Gypsum destined for Zambia



Complex Calsus, Complex Calsul and CCM being loaded for delivery to **Zambian Fertilizer**, our distributor in Zambia.



With our products already being used in Mozambique and Namibia it is currently also being tested in Western Australia.

The role of leadership can be earned in many ways, small or big. For instance, you can display leadership and earn respect from others in the following ways:

- 1. Expert or superior knowledge about a subject or something*
- 2. Excellence in execution of tasks*
- 3. Positive attitude, high morale*
- 4. High ethical values and codes of conduct*
- 5. Good human relations*
- 6. Streamlining paper work, production, methods, your use of time*
- 7. Being innovative or creative*

General Douglas MacArthur



**Gliogrow Gliomax Gliosense
Glionut Gliograin Gliocain**



WORLD FOCUS

1596 (Pty) Ltd

*Creating wealth using
innovative technology*

**A non-harmful, non-toxic and
naturally occurring metabolite**

Complex CalSus

Micronized Calcium source in carbonate
form (B4682)

Complex CalSul

A micronized Calcium and Sulphate
source (B4990)

CCM

A micronized Calcium and
Magnesium source (B4683)

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