



PRODUCT CATALOGUE



COMPANY PROFILE

TRIOMF Fertilizer stands tall as the most readily recognised name in the South African fertilizer industry. TRIOMF has a long standing tradition and heritage with an established history of sourcing, importing and manufacturing the very best in fertilizer products. This major operation is headquartered in Potchefstroom where a state-of-the-art production facility offers:

- The first-of-its-kind homogeneous, single granule fertilizer manufacturing unit in South Africa
- The largest granular fertilizer blending facility in South Africa
- A highly sophisticated liquid fertilizer manufacturing plant
- A super-advanced robotic packing line

TRIOMF Fertilizer is furthermore available from various strategically placed locations nationally for easy and effective distribution.

TRIOMF Fertilizer is again proving to be the farmer's prime choice fertilizer brand and certainly the preferred supplier of value-added "Agri" services and expertise.



The TRIOMF Trading Team consists of its leading directors, top management, field agents and qualified agronomists. It is here where a close collaboration between agents and agronomists from the TRIOMF Agri Xcellence Team take place to bring the ultimate solution in terms of product and advice to the food producer nationally.

TRIOMF's team of competent logistics specialists take care of all the producer's transport requirements. TRIOMF Logistics has a sound track record in the industry and can assist the producer with delivering his liquid and granular fertilizer directly to the farm. With over 70 transport contractors on its books to complement its own fleet, TRIOMF Logistics has an intricate national and cross-border transport and distribution network to service its TRIOMF valued customers swiftly and professionally.

TRIOMF Fertilizer is a proud member of FERTASA - the Fertilizer Society of South Africa.

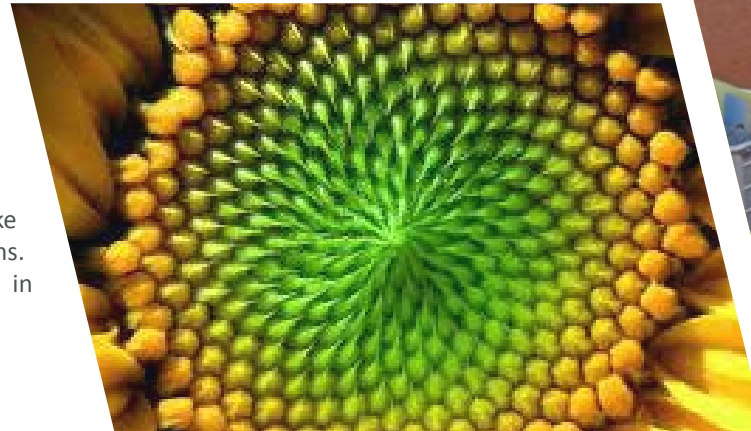


As the name indicates this facet of TRIOMF excels in precision farming and has highly qualified soil scientists and agronomists who are passionate and purposeful in assisting the food producer in obtaining optimal yields for maximum profits. These specialists are readily available to advise farmers based on in-depth soil and plant analysis. Recommendations are presented to the farmer to implement, followed by an aftercare service, all resulting in a more profitable business through the more effective use of resources. These specialists assist the serious farmer with soil chemical mapping and soil classification. This information is used to determine the risk on the farm and how to best manage input costs. The producer will now be able to manage his high potential areas as well as his low areas accordingly, to be able to produce optimum yields. This is mainly achieved by using the information gathered to determine the best strategy for the producer's specific farm and practices.

Why Accurate-Agri?

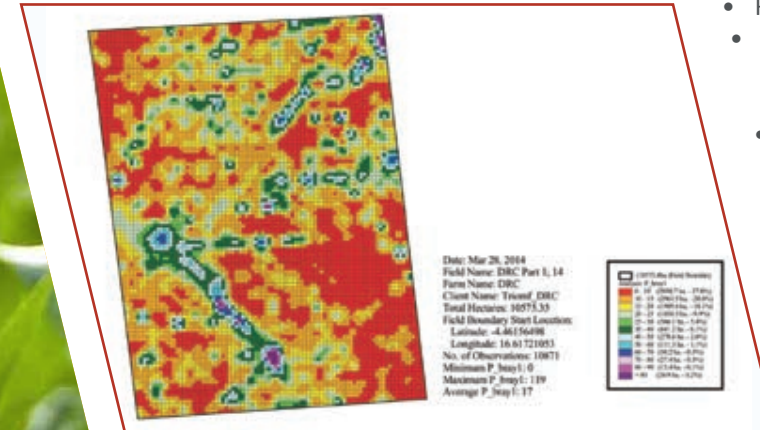
Many farmers are familiar with chemical grid analyses, but it is like looking at a farming enterprise through a "key-hole". TRIOMF Agri Xcellence's practice of "Accurate-Agri" gives the producer the complete picture. Integrated soil classification and soil chemical analysis together with yield information explain abnormalities found in cultivated fields. This information is used to identify and manage these abnormalities which enables the farmer to be more effective with his input costs, therefore maximizing profitability. A specialist from our TRIOMF Agri Xcellence team is available to be present on the producer's farm where expert advice and recommendations based on in-depth analyses are provided, which paired with valuable aftercare service, result in the improved management of input costs, more effective utilisation of resources and better farming practices.

With the completion of the "Accurate-Agri" cycle, the farmer is able to make informed management decisions according to his farm's strengths and limitations. Through these expert recommendations the producer can be confident in receiving the best return on his investment.



TRIOMF AGRI XCELLENCE

ACCURATE-AGRI



Benefits of Accurate-Agri?

- Accurate-Agri enables farmland to be analysed in order to achieve the optimum yield per hectare and to determine the potential for the season
- With this information, the right lime and plant nutrition can be administered at the right time and place
- Without Accurate-Agri, under- or over-fertilization can affect profitability
- Many farmers are likely to cultivate fields and even entire farmlands in the same way. Very often variation occurs on these areas. This means that cultivation will also vary. Accurate-Agri addresses these issues
- With Accurate-Agri, more than just mere soil mapping is considered when developing and planting grids and maps which can vary according to grain rotation
- If appropriate implements and tillage for a specific farmland are used, fuel can be saved and yields increased
- Risks and uncertainties relating to farming can be reduced
- Grain choice and rotation are directly linked to soil potential for the season. Accurate-Agri offers complete grain recommendations and solutions
- Accurate-Agri takes the first step when new/existing areas of farmland are being developed by doing a full risk and profitability evaluation to determine the characteristics and values of the soil
- Accurate-Agri provides practical charts of zones set out on the farmland which identify the necessary management required
- The principles of Accurate-Agri form the basis for successful crop production. Facts are collected and studied to eliminate uncertainty in agricultural farming

The TRIOMF Agri Xcellence team offers specialised services which include:

- Satellite images
- Soil mapping and classification
- Identifying risk land-areas
- Compiling of soil-chemical profiles
- Soil preparation and fertilizer planning
- Obtaining, processing and interpretation of yield data

Practical charts include:

- Tillage depth chart
- Cultivation type chart
- Practical variable rate fertilizer application chart
- Plant available water chart
- Long-term average yield chart

NitroPlus

Homogeneous single granule fertilizer

- NitroPlus is South Africa's first TRUE Homogeneous single granule fertilizer
- This remarkable and total composition of nitrogen (N), phosphorus (P), potassium (K) and other elements is a first-of-its-kind, now made available by TRIOMF Fertilizer
- The NitroPlus single granule is perfectly round with balanced hardness which ensures on time release of elements
- The composition of the NitroPlus particle is homogeneous, thus all ingredients are completely mixed and distributed and are summarized in each grain
- All the pioneering technology of TRIOMF Fertilizer products is contained in NitroPlus
- Unique formulations of NitroPlus can be manufactured according to soil and plant requirements
- NitroPlus will soon be available in various tailor-made combinations



NitroPlus
Pearl

NitroPlus
Topaz

NitroPlus
Diamond

NitroPlus
Coral

NitroPlus
Emerald



The **1st** TRUE **1**-granule fertilizer in
South Africa
The **1st** all-in-one Formula
The **1st** of its kind
The **1** for you



NITREX™

THE RED FERTILIZER

NitreX is the new amazing nitrogen-based granular fertilizer marked by its unique red appearance. NitreX is different to other urea products due to its specific qualities relating to urease and nitrification. The extremely precise properties of NitreX promote excellent and effective distribution and absorption of nitrogen.

What are the shortfalls of urea?

- Urea is by far the most commonly used source of nitrogen worldwide in N-based fertilizers
- Urea switches very quickly to ammonia when it comes into contact with soil
- Most soil bacteria, fungi, algae etc. contain the enzyme urease



Benefits of NitreX compared to urea?

1. NitreX- the red fertilizer - contains an urease inhibitor that prevents conversion of urea into the NH_3 gas phase, where it is volatile. The loss of nitrogen is therefore limited and NitreX is suitable for surface application. The urea isn't converted to NH_3 therefore giving the urea a chance to penetrate the soil, where it converts to NH_3 at lower concentration and where it will not be volatile
2. NitreX – contains a nitrification inhibitor, therefore it suppresses the conversion of NH_4^+ to NO_3^- . The release of nitrate is more controlled and the result is less leaching of N
3. NitreX has a high concentration of N which means that there is a significant difference in price / kg of N. This is a benefit of NitreX when compared to other sources of N-fertilizer:

- Urease is responsible for the conversion of urea to ammonia gas
- Ammonia gas then converts to ammonium
- If urea is applied to the soil surface and it is not immediately followed by rain/irrigation, volatilization in the form of ammonia gas occurs

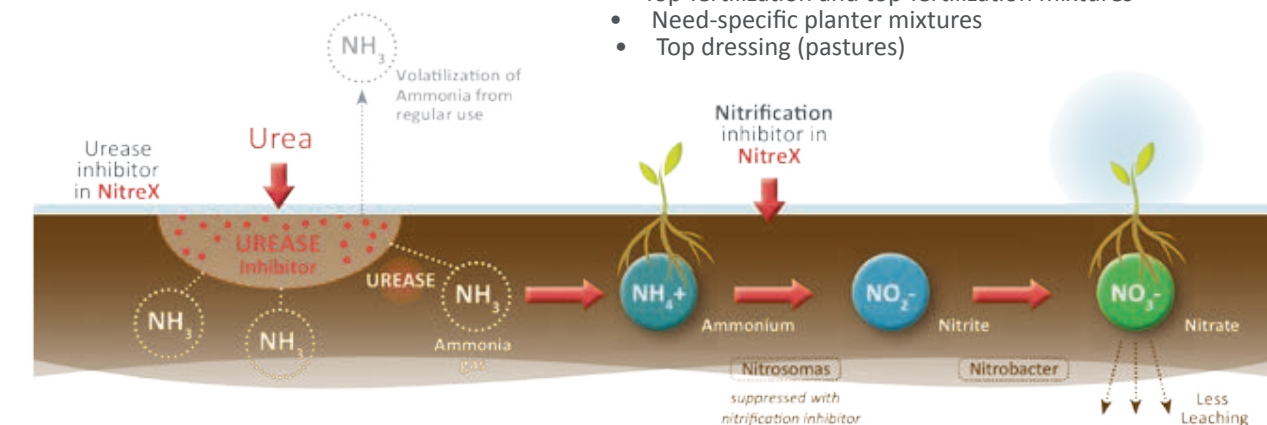
How does this fantastic product get better?

NitreX-S [1:0:0 (36)+10% S]

- Readily available N in the form of NH_4^+
- Benefit of urease inhibitor
- Benefit of nitrification inhibitor
- High sulfur concentration

Applications of NitreX and NitreX-S

- Pre-plant and pre-plant mixtures
- Top-fertilization and top-fertilization mixtures
- Need-specific planter mixtures
- Top dressing (pastures)



Politain™

ORGANIC COATING

Politain is a sophisticated, balanced and predominantly organic coating, glazing every individual fertilizer granule as an urea-coating.

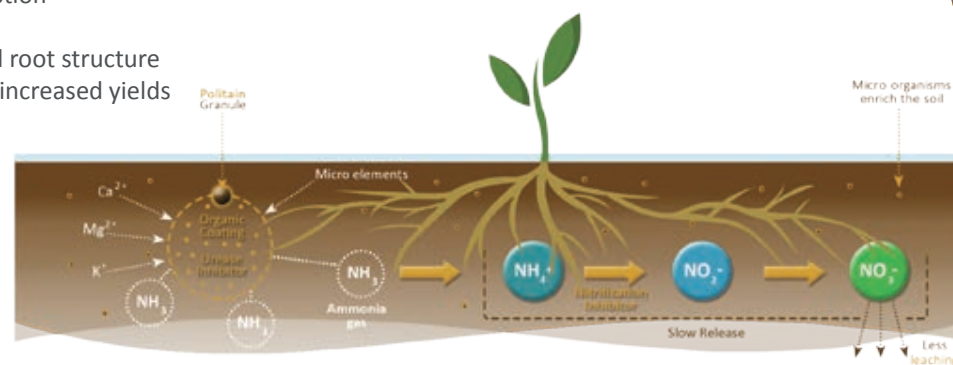
Politain has a complex composition of a unique ratio between micro-organisms, enzymes, organic acids, melanins, peptides, polysaccharides, vitamins and minerals. Specialised stabilisers and bonding agents are utilised to maintain product integrity and reaction time. The effective use of Politain leads to more effective nitrogen absorption by the plant with reduced energy consumption.

The specific characteristics and actions of Politain include:

- Stabilising of soil pH
- Improvement of soil moisture and water-retention abilities
- Promotion of microbial life for healthy soil
- Limited leaching of nitrate
- Conversion of soil nutrients suitable for plant absorption
- Acceleration of germination
- Improvement of root development, root growth and root structure
- Optimising total plant growth ultimately resulting in increased yields

Applications of Politain:

- Pre-plant and plant mixtures
- Need-specific planter mixtures



LAPP™

SUPERIOR PHOSPHATE

LAPP is a concentrated ammonium polyphosphate solution that can be used as a starter fertilizer and/or a foliar fertilizer to replace other forms of phosphate fertilizer, including granular blends.

LAPP ensures rapid and excellent root development and root distribution resulting in plant growth consistency and optimum nutrient uptake.

The ease of application of this high-performance fertilizer makes it a cost-effective alternative to conventional granular products.

With the booster effect that the nutrition in LAPP provides the growing plant with, the producer can look forward to excellent and flourishing crops delivering high yield percentages.



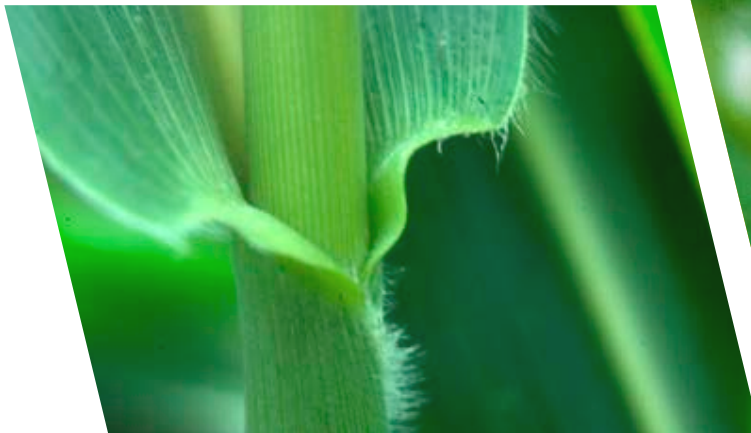


Bakgat is TRIOMF's new instant energy drink. It contains as a foliar, all the tonic ingredients and various micro-elements to maximise the plant's growth potential. Phosphate supplies energy, magnesium strengthens the plant's "factory" as the core of chlorophyll, and with much higher levels of potassium than other products, we can say that the plant's turbo is boosted.

BAKGAT BROADLEAF

Bakgat Broadleaf is TRIOMF's specialised foliar feed specifically developed for broadleaf crops like soybeans, peanuts and leguminous plants. Bakgat Broadleaf contains nitrogen, phosphate, potassium, magnesium, sulphur and various micro nutrients. The role of phosphate is to supply energy to the growing plant. Potassium is associated with the movement of water, nutrients, and carbohydrates within the plant which stimulates early growth, increases protein production, maximises water usage and ups resistance to insects and disease.

Bakgat and Bakgat Broadleaf contains amino ingredients such as fulvic and humic acids, enzymes and super concentrated micronutrients i.e. iron, copper, zinc, manganese, boron and molibdenym to promote enzyme reductase, protein synthesis, chlorophyll production, growth regulators, the development of new cells and roots, and to activate nitrate reductase. Bakgat Broadleaf also contains cobalt in addition to the common amino acids and micro nutrients found in Bakgat. Cobalt is one of the most important micro nutrients for leguminous plants because these enzyme systems of the rhizobium bacteria are known to contain cobalamin. There is a correlation between cobalt concentrations and the fixation of nitrogen and root nodule development. Both products ensure an energized, strong and nutritious plant.



Mushe Maize was developed by TRIOMF as a crop-specific foliar feed to accommodate the unique needs of the maize plant.

Taking all the tonic-like ingredients of TRIOMF's Bakgat foliar feed as the base formulation for Mushe Maize, producers can be assured of the finest targeted plant enrichment.

Nitrogen, phosphate, potassium, magnesium, calcium, sulphur and various micro-elements team up to take the maize plant to its maximum growth potential. With phosphate supplying energy, magnesium to strengthen and with high levels of potassium, the maize plant is now supercharged.

Amino-ingredients such as fulvic acid, humic acid, enzymes and super-concentrated micro elements i.e. silicone, cobalt, nickel and selenium enhance root development in the maize plant and defends the plant against external stressors.

With TRIOMF Mushe Maize, the maize plant is robust and well fed with an intense healthy appearance, ready to offer the best in maize production and yield.





TRIPLE 10TM

FOLIAR SPECIALITY

Triple Ten (10:10:10) combines the best of conventional inputs with cutting-edge organics to provide a unique high-production option for both fruit and vegetable producers and broadacre farmers. The developers of Triple Ten (Nutri-Tech Solutions - NTS) promote an approach they term "Fusion Fertilizing", where the performance and sustainability of N-P-K and trace element blends are dramatically enhanced through the inclusion of potent organics.

Carbon-buffering and natural chelation are two of the processes involved in the boosting of N-P-K components. The N-P-K elements in the Triple Ten formulation are derived from "hot-mix" N-P-K. "Hot-mix" N-P-K is manufactured using a special process developed by NTS. Three incompatible N-P-K concentrates are blended, creating a violent chemical reaction. The fusion generates such extreme heat that the mixture can "boil" for up to two days. When the solution has returned to normal temperature, the three ingredients have formed a totally different chemical compound. This potent, new N-P-K contains low sodium levels, has a neutral pH and is non-corrosive. The negatives associated with the parent materials are no longer present yet offer an important gain: Plant growth is promoted by the energy released by fertilizers rather than by the actual fertilizers themselves. The clean, powerful N-P-K chemical component is complimented by the addition of a complete range of chelated trace elements. This high quality N-P-K/trace element base is then used to build a totally new kind of fertilizer, involving natural growth promoters, micro-organisms, amino acids, enzymes, protein, colloidal minerals and vitamins.

Natural growth promoters, enzymes, broad-spectrum trace elements, amino acids, vitamins and micro-organisms are some of the components in Triple Ten which are required for crop quality and maximum yields.



TRI-AMINO[®]

BALANCED NUTRITION

This high-performance, quick-release potassium/amino acid combines nutritional and fast absorbency abilities for instant results in stressed crops and also boosts growth and development.

Tri-Amino is a complete organic, high-carbon, high-brix plant extract. Its composition and perfect ratios of all the essential plant nutrients makes it a perfect partner to all inorganic (high salt index) fertilizers with the high humic acid content acting as an ideal buffer. A balanced nutrition program for any crop will take chemical, physical and biological aspects of the soil into consideration. Of these three, the "biological" component has traditionally suffered the most and is the one best addressed by Tri-Amino, when taking its full complement of 19 amino acids into account.

Tri-Amino will be used as a complete fertilizer. Of the trace elements – all of which are required in very low amounts – silicon (Si) is considered high and available in plants. Fertilizers feed the plant while Tri-Amino feeds the soil making both equally important for viable and sustainable crop production. One can say that Tri-Amino acts as a booster for plant energy especially during a crop's reproductive stage. When it comes to maize, wheat, soya and peanuts, foliar spraying assists in building up a resistance to disease as well as bolstering yields during the reproductive phase.



micros ZTM IDEAL SUPPLEMENT

Micros Z is a simple product which is mainly used to compliment other liquid fertilizer products. It consists of high levels of various inorganic trace elements, and will usually accompany another product in volumes determined by the requirements of a specific crop.

Micros Z acts an ideal enhancer to TRIOMF POP-UP, TRIOMF Bakgat, TRIOMF Mushe Maize and other TRIOMF liquid fertilizers, specialities and foliar feeds. Micros Z can also be used on its own with success as an application rich in trace elements.

The administration as a liquid application in the furrows is essential considering the zinc at 50 000 dpm. Zinc and maize go hand in hand therefore Micros Z can also help the plant in rectifying the inducing manganese and zinc shortages following a glyphosate spraying.

Another important use is the application as a foliar spraying for pecan nuts throughout the season due to its zinc deficiency. Together, Tri-Amino and LAPP work in perfect synergism. The composition of the micros promotes plant health considering the strengthening abilities of manganese, copper and zinc in the fight against fungal infections.

Also contributing to the functioning of the legume nodules are the elements cobalt and molybdenum which further highlight the necessity of furrow administration as well as one or two foliar sprayings during the season.



POP-UPTM
STARTER FEED

POP-UP is a concentrated suspension ideal for soil and foliar-application, uniquely designed to accelerate germination and to strengthen the new seedling unlike any other product in its class. POP-UP ensures quick and even germination and promotes strong root-development, equipping the young plant to have improved resistance against environmental stress and disease. POP-UP contains elements crucial for the establishment of nitrogen-binding rhizobium bacteria. Micro-elements such as boron and silicon as well as vitamins, humates and amino acids serve as prolonged nutrition for the seedling prior to germination. Unsurpassed results obtained from clinical tests have proven POP-UP to be the best start-up growth promoter and root development product available on the market.

With the use of a start-up booster like POP-UP, the young and mature plant will require less conventional fertilizer, reducing production input costs. A growth support product developed in South Africa, when applied in the plant furrow, will aid in establishment and encourage vigorous seedling establishment. The use of POP-UP can also minimise the necessity to replant due to unfavourable conditions that lead to poor stands. Where regular wind damage occurs on crops, especially on young plants, POP-UP will aid through ensuring fast and healthy growth in the early plant growth stages.





SOIL PREPARATION

Liquid Lime is a pre-plant soil preparation product which enhances and improves soil quality and soil health. Liquid Lime is easily applied directly to the plant-band. The application of Liquid Lime is essential to start a succesful plant cycle.

Properties and benefits of Liquid Lime:

- An ultra micro-fine calcium carbonate slurry
- Manufactured from a high purity white marble (limestone)
- Contains an appropriate biocide
- A colloidal suspension and reactive substance
- Disperses very effectively into soil due to it being colloidal
- Has a 100% Relative Resin Suspension Rate
- Has 100% immediate efficacy in neutralizing surface-soil acidity in the plant-band
- Has an intensity factor of 100%

Liquid Lime is a limestone suspension which acts as a multi-purpose application product. The calcium carbonate component is super-fine meaning fast reaction with targeted application, whether used as a soil or leaf application. Calcium is needed in large quantities in soil because plants and crops need sufficient quantities of calcium for healthy growth and production. Therefore, Liquid Lime will solve the problem whenever a case of calcium deficiency is detected in the soil or if the calcium uptake is limited by factors such as low pH, acidic soils or improper nutrient balances. Liquid Lime ensures highly reactive calcium application when applied to the soil due to micro-fine particle size, high neutralization capability and high-specific mass. Therefore soil pH will increase in the immediate surrounds and plant nutrition will be optimized. Liquid Lime is very smooth and easy to handle which suspends well in water meaning it is well suited as a foliar application for calcium nutrition. From a plant nutrition point of view, Liquid Lime hits the target.



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