

— TURF — CATALOGUE



Quality, Affordable Turf Care

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ACTIVIST MAG-FLO[®] TURF

25% Magnesium, 1.7% Nitrogen & Trace Elements

A high analysis, trace element activated source of magnesium for the correction and prevention of magnesium deficiencies



Benefits of Activist Mag-Flo[™]

- ✓ Incorporates Agrichem's Activist Technology delivering both a rapid uptake profile as well as a residual effect, whilst maintaining turf safety
- ✓ Contains a range of trace elements that effectively 'activate' the uptake of magnesium
- ✓ Enhanced uptake means lower application rates and less wastage
- ✓ Micro-fine particles ensure even coverage and effective plant uptake
- ✓ High analysis product reduces quantity of product needed and saves on freight costs
- ✓ Free flowing formulation makes it easy to decant into spray equipment, mixing tanks and irrigation
- ✓ Can be applied with a wide range of other agricultural chemicals, reducing the number of spray applications needed

MAGNESIUM DEFICIENCY

Common signs of magnesium deficiency are:

- Strong yellowing between main leaf veins
- Old leaves are affected first
- Stunted growth

THE ROLE OF MAGNESIUM: Magnesium forms an essential part of chlorophyll structure. This is essential for photosynthesis and therefore most other turfgrass functions, particularly the uptake and mobilisation of other plant nutrients, specifically phosphorus. Magnesium is very mobile in the plant and deficiencies are seen in the old leaves with inconsistent chlorosis.

Magnesium is an essential part of the ATP activation process that helps in energy storage in cell catalysing various enzyme systems that regulate metabolic processes. Magnesium deficiencies can lead to stunted growth.

THE ROLE OF TRACE ELEMENTS Calcium, Iron, Manganese & Zinc: There are complex interactions between magnesium and the key trace elements of iron, manganese, and zinc within Activist Mag-Flo, which increase the uptake and utilisation of the applied magnesium for maximum benefit to turf.

The nutrient in this formulation becomes available to the plant as the micron-sized particles become re-wetted. As this drying/wetting cycle happens on a daily basis, so the nutrients become available and are released in a controlled manner. This cycle of slow release can take place for up to 6 weeks.

Activist MAG-FLO is a high analysis Magnesium product that contains a range of complementary micronutrients that have proven to be the precursors for critical enzymes responsible for effectively 'ACTIVATING' Magnesium for effective turf uptake and growth. The Magnesium in this formulation becomes active during the nightly rewetting cycle, creating a slow release effect.

Product Characteristics

Specific Gravity: 1.37 Colour: Beige suspension

Analysis	Australia (w/v%)	International (w/w%)
Magnesium (Mg)	25.0	18.0
Nitrogen (N)	1.7	1.2
Calcium (Ca)	0.22	0.16
Iron (Fe)	0.21	0.15
Manganese (Mn)	0.15	0.11
Zinc (Zn)	0.15	0.11

Directions for use



Foliar Spray



Fertigation

CROP	RATE / ha	MIN DILUTION*	COMMENTS
TURF Fairways	10 - 40 L or 100- 400 ml / 100 m ²	1 : 10	Where magnesium requirements are high, apply to fairways and irrigate well to eliminate residues. Dry leaf analysis of healthy turf should contain mg levels between 0.1 - 0.5% on couch grass and 0.25 - 0.3% on bent grass.
Greens	10 L or 100ml/100 m ²	1 : 10	



MINIMUM DILUTION : A dilution of 1 : 100 means 1 part product : 100 parts water.
In hot weather, use the higher dilution rates.





-BIO- ELITE TURF



Promotes the uptake, absorption, and translocation of nutrients in the plant., Bio Elite is highly efficient with very low application rates. Increased nutrient uptake and movement lead to the following **benefits:**

- ✓ Increased Nutrient Density & Improved Quality
- ✓ Higher Soluble Solids & Sugar Content
- ✓ Larger Size & Better Color
- ✓ Healthier Canopy

- ✓ Significantly Healthier Plants & Increased Yields
- ✓ Increased Rooting
- ✓ Greater Biomass
- ✓ Increased Germination, Faster Emergence
- ✓ Increased Photosynthesis

- ✓ Stress Mitigation & Recovery
- ✓ Including Heat & Drought Stress
- ✓ Frost Stress
- ✓ Salinity Stress

- ✓ Increased Efficiency of Applied Nutrients
- ✓ Increased Movement of Nutrients Throughout the Plant
- ✓ Reduces Soil Tie-ups
- ✓ Greater Moisture Utilization

- Turf grass both warm and cool season species.
100-150 ml /ha at 21 day intervals

Turf spp	Rate/ha	Comments
Warm season Couch (Cynodon dactylon) such as Tifway, Tifgreen & 328	100 – 150	Application intervals of 21 – 30 days. For best effect mix Bio-Elite with fertiliser applications to enhance nutrient and in particular calcium translocation along with greater resistance to turf pest and diseases
Cool season Bent grass (Agrostis spp) such as Pencross, Flagstik & SR1020		Application intervals of 14- 21 days. For best effect mix Bio-Elite with fertiliser applications to enhance nutrient and in particular calcium translocation along with greater resistance to turf pest and diseases

SPECIFICATIONS (Manufacturing tolerances / Guaranteed analysis)	Analysis	Value Range
	pH	6.5 – 8.0
	Specific Gravity	1.005 – 1.015
	Organic Matter	0.9 – 1.1 % w/w

* Analysis of elements is subjected to testing variances which depend on the specific laboratory and on the equipment used. The acceptable tolerance is $\pm 10\%$ variance between results.
Measurements reported as at 25°C unless otherwise stated.



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GROCAL[®] MGB TURF

17% Calcium, 10% Nitrogen, 4% Magnesium, 0.1% Boron plus trace elements

High analysis calcium and highly soluble sulphate-free solution with added magnesium, boron and nitrogen for correction of deficiencies within turfgrass to maintain healthy growth.



Benefits of Grocal MGB[®] Turf

- ✓ Enhanced turfgrass health and firmness through improved cell strength and structure
- ✓ Added Magnesium to improve green colour
- ✓ Premixed in carefully controlled ratios so the turfgrass receives key plant tissue elements for health, strength, colour and growth
- ✓ Reduces the negative effects of sodium
- ✓ Completely soluble and plant available delivering the required amount of nutrient with low application rates
- ✓ Can be applied with a wide range of other products, reducing the number of spray applications needed

THE ROLE OF CALCIUM: Calcium is critical for the strength and integrity of cell walls. It plays an important role in cell division and growth development, especially of root systems. Without available calcium, a healthy and abundant rootmass cannot develop. Calcium also protects plant cells from toxins, strengthening tissue to reduce the negative effects of accumulating sodium. Trace amounts of Boron within the formulation aid in calcium uptake and utilisation within the plant.

CALCIUM DEFICIENCY: Calcium has poor mobility. Poor unthrifty root systems often result. Turfgrass is significantly weakened, potentially allowing cells to be infected by disease pathogens. Growth and response from nitrogen applications will be limited.

THE ROLE OF MAGNESIUM: Magnesium forms an essential part of the chlorophyll cell. This is essential for photosynthesis and therefore most other plant functions. Magnesium is very mobile in the plant and deficiencies are seen in the old leaves with inconsistent chlorosis.

THE ROLE OF NITROGEN: Nitrogen is the essential building block of plant structure and is vital to turfgrass growth but can be a limiting factor in uptake of other nutrients. Nitrogen is the major building block in protein and chlorophyll. It is also essential for lipid and cytoplasm formation. Highly mobile in the plant, it is translocated and utilised in the growing tips.

The unique combination of calcium and magnesium in conjunction with added nitrogen and trace amounts of Boron, is an ideal formulation for regular application on turfgrass to ensure plant tissue levels of these key nutrients are maintained promoting turfgrass health, vigour and colour, along with increased disease resistance.

Sodium Fighter Strengthen Your Turf's Ability to Fight Sodium

Grocal MGB Turf is a high analysis and highly soluble sulphate free calcium solution that can be used in conjunction with granular calcium programs to fight the effects of the detrimental salt sodium. Sodium is often a significant component of non-potable irrigation water sources, and can build up in the soil and plant tissue over time. Sodium will weaken the turfgrass reducing its ability to withstand other pressures such as wear and disease. Calcium is the main nutritional weapon to deal with the negative effects of sodium both in the soil and plant. Significantly greater resistance to the weakening effects of applied sodium will result from using Grocal MGB Turfgrass as a regular foliar or soil drench application in conjunction with an appropriate granular calcium amendment program.

The high analysis of 17% Calcium provides more 'bang for your buck' compared to other liquid calcium products on the market.

Its high solubility means the calcium is available to fight the negative effects of irrigation applied sodium.

Product Characteristics

Specific Gravity: 1.51 **Colour:** Clear emerald


Analysis	Australia (w/v%)	International (w/w%)
Calcium (Ca)	17.0	11.3
Nitrogen (N)	10.0	6.6
Magnesium (Mg)	4.0	2.6
Boron (B)	0.1	0.07
Trace Elements		

Directions for use

Agitate contents well before dilution. Suitable for application by:

 Foliar Spray	 Fertigation
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CROP	RATE / ha	MIN DILUTION*	COMMENTS
TURF Maintenance	20L	1:10	Apply as a foliar fortnightly or as required. For bent grass under hot conditions, use 1 : 40
For sodium mitigation	40L		Apply as a soil drench to reduce the negative effects of sodium. Apply fortnightly or monthly depending on the severity of sodium problem. For soil drench applications, use a high volume of water or irrigate immediately following the application

 **MINIMUM DILUTION :** A dilution of 1 : 100 means 1 part product : 100 parts water.
In hot weather, use the higher dilution rates.



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HEAD OFFICE: VICENTIA EAST AFRICA, P.O. Box 71212-00622, Nairobi, Kenya
Telephone: +254 706 500 800 Email: info@vicentiaea.com
Web: www.vicentiaea.com





OM-3TM

TURF

2.8 – 0 – 2.7 NPK

TURFGRASS

APPROVED PRODUCT 108084P
BFA
REGISTERED
PRODUCT



**Complete natural organic concentrate and biological activator
comprising humic acid, kelp extract and fish emulsion**

Features of OM-3

- ✓ Contains seaweed extract with high auxin content to stimulate root development
- ✓ Contains a combination of 16 essential amino acids and > 4900 mg/L of total amino acid content
- ✓ Contains Humic Acid to improve foliar uptake and enhance nutrient uptake from the soil
- ✓ The combination of organic matter improves the CEC around the root zone
- ✓ A pourable liquid formulation

Benefits of OM-3

- ✓ Stimulates root development to optimize turfgrass performance and maintain robust turf grass through high stress conditions
- ✓ Provides high level amino acid nutrition that enhances plant energy levels and improves turf grass performance and recovery from stress
- ✓ Improves the Cation Exchange Capacity of soil to enhance nutrient availability and reduce leaching and losses
- ✓ Improves soil condition by enhancing carbon content and stimulating microbe populations in the soil
- ✓ Can be applied by foliar or fertigation applications
- ✓ Gives multiple benefits in one easy to handle liquid

Naturally derived auxins extracted from kelp seaweed, have been successfully applied to professional turfgrass for many years. Products such as Kelpak containing the kelp seaweed *Ecklonia maxima*, have been proven to trigger excellent root growth response while contributing to heightened turfgrass health and stress tolerance.

The unique formulation of OM3 has been developed to provide all the well established benefits of *Ecklonia maxima* kelp extract, plus those of the amino acid and humic fractions. OM3 is a complex and powerful biological activator to stimulate root growth in turf grass, increase plant growth efficiency and stress tolerance, and revitalize the root-zone with increased Cation Exchange Capacity (CEC) and microbial activity.

Ideal for professional turf grass grown in sand profiles, infertile soils, and in high stress environments, as well as for early establishment of seeded or sodded turf.

Product Characteristics

Specific Gravity: 1.15 **Colour:** Clear brown liquid


Analysis	Australia (w/v%)	International (w/w%)
Nitrogen (N) as organic	2.8	2.4
Potassium (K) as humate	2.7	2.8
+ humic acid, kelp extract and organic concentrate		

Directions for use

Agitate contents well before dilution. Suitable for application by:

 Foliar	 Fertigation
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CROP	RATE / ha	MIN DILUTION*	COMMENTS
TURF	100 ml / 100m ² 200 ml / 100m ²	1:20	Apply at monthly intervals. Prior to tournament and as required for stress management.

 **MINIMUM DILUTION :** A dilution of 1 : 100 means 1 part product : 100 parts water.
In hot weather, use the higher dilution rates.

NOTE: The suggested rates of application are designed for typical Australian conditions and such should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf (sap) tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.



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HEAD OFFICE: VICENTIA EAST AFRICA, P.O. Box 71212-00622, Nairobi, Kenya
Telephone: +254 706 500 800 Email: info@vicentiaea.com
Web: www.vicentiaea.com





SUPA STAND[®] PHOS TURFGRASS *TURF*

6 - 10 - 3 NPK + 10% Kelpak

An effective starter fertiliser for promoting development of root systems and early turfgrass growth



BENEFITS OF SUPA STAND PHOS

- ✓ Develops larger, more vigorous root systems through a unique combination of plant hormones and NPK
- ✓ Suitable for various applications specifically during and post renovation, and through the first six – eight weeks of growth
- ✓ The included phosphite form of phosphorus enhances plant immunity to disease pathogens that affect new roots
- ✓ Added organic matter to improve soil structure and increase nutrient uptake
- ✓ Free flowing formulation makes it easy to decant into spray equipment, mixing tanks and irrigation tanks

GERMINATION BOOSTER

Supa Stand Phos contains critical plant hormones (auxins and cytokinins) in a ratio which assists in the stimulation of turf seed germination and root growth.

THE ROLE OF NITROGEN

Nitrogen forms proteins and increases the yield of all crops. It is the essential building block of plant structure and is vital to plant growth but can be a limiting factor in uptake of other nutrients. Nitrogen is often leached from the soil therefore regular small applications will ensure efficient uptake without excessive losses.

THE ROLE OF PHOSPHORUS

Plants need phosphorus at all growth stages particularly in early growth stages. Phosphorus acts as a structural component of nucleic acids and phospholipids which form plant membranes. It is also important in root growth, cell division, photosynthesis, sugar and starch formation, energy transfer and movement of carbohydrates. Without phosphorus, turfgrass growth and health is limited due to low energy production.

THE ROLE OF POTASSIUM

Potassium is required by turfgrass in quantities second only to nitrogen, and therefore ensuring adequate levels is essential for maintaining healthy turfgrass. Potassium regulates the electrolytes and turgidity of plant cells. Potassium occurs in the guard cells of the stomata and is therefore essential in respiration and transpiration. Potassium also assists in cell division, protein and carbohydrate formation. Therefore it has a large role to play in increasing turfgrass stress tolerance and strength.

DEFICIENCY SYMPTOMS - PHOSPHORUS

- Purple older leaves
- Purple Stems
- Dark yellow leaf tips
- Low yield

Product Characteristics

Specific Gravity: 1.25 **Colour:** Brown suspension

Analysis	Australia (w/v%)	International (w/w%)
Nitrogen (N)	6.0	4.8
Phosphorus (P)	10.00	(P ₂ O ₅) 18.3
Potassium (K)	3.20	(K ₂ O) 3.1
Kelpak	10.00	8.0
Organic Extract	10.00	8.0
Trace elements		

Directions for use

Agitate contents well before dilution. Suitable for application by:

 Foliar	 Fertigation	 Pre plant dip	 Furrow Injection
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CROP	RATE / ha	MIN DILUTION*	COMMENTS
TURF	150-200 ml/ 100m ²	1 : 20	Apply at early germination or at green construction / renovatio



MINIMUM DILUTION : A dilution of 1 : 100 means 1 part product : 100 parts water.

In hot weather, use the higher dilution rates.

NOTE: The suggested rates of application are designed for typical Australian conditions and such should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf (sap) tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.



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STAND

SKH™

APPROVED PRODUCT 1080BAP



20% Silica, 15% Potassium, 1% humic acid

TURFGRASS

Concentrated silicon and potassium to improve heat and drought tolerance and cellular turgidity



BENEFITS OF STAND SKH

- ✓ Improves cutability, ball roll and speed on greens
- ✓ Improves turfgrass ability to tolerate heat and drought
- ✓ Improves disease resistance
- ✓ Enhances turfgrasses immune system
- ✓ Completely soluble and turfgrass available delivering the required amount of nutrients with low application rates
- ✓ Liquid solution makes it easy to decant into spray equipment, mixing tanks and irrigation

THE ROLE OF SILICON

Like other elements silicon plays a vital role in turfgrass physiology. The range of silicon in turfgrass tissue is around 0.1 to 10%. Silicon enters turfgrass and accumulates under the epidermis of roots and shoots. It forms a gel and associates with calcium and pectins to stabilise cell walls and increase turfgrass ability to handle stress conditions. Silicon therefore, has the ability to improve turfgrass strength and structure.

THE ROLE OF POTASSIUM

Potassium regulates the electrolytes and turgidity of turfgrass cells. Potassium occurs in the guard cells of the stomata and is therefore essential in respiration and transpiration. Potassium also assists in cell division, protein and carbohydrate formation. Humic acid is added to the formulation to improve turfgrass uptake and hold the silica to the turfgrass. Humic acid and silica have an association in the soil profile.

Product Characteristics

Specific Gravity: 1.28 **Colour:** Dark brown clear liquid

Analysis	Australia (w/v%)	International (w/w%)
Silica (SiO ₂)	20.0	7.0
Potassium (K)	15.0	14.2
Humic Acids 1.0		

Directions for use

Agitate contents well before dilution. Suitable for application by:

 Foliar Spray	 Fertigation
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CROP	RATE / ha	MIN DILUTION*	COMMENTS
GREENS	3 - 5 L	-	Apply at monthly intervals for turf hardness, greater tolerance to heat and drought diseases resistance and increase slimp speed. Can be applied upto rate of 20L/ha in times of stress.
TEES/FAIRWAYS	5 L/ha	-	5 L/ha in 500L water (winter) 5 L/ha in 800L water (summer)



MINIMUM DILUTION : A dilution of 1 : 100 means 1 part product : 100 parts water.
In hot weather, use the higher dilution rates.

NOTE: The suggested rates of application are designed for typical Australian conditions and such should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf (sap) tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.



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SUPA TRACE[®]

ADVANCE *TURF*

The multi-vitamin treatment for your turf

TURFGRASS

The multi-vitamin treatment for your turfgrass. Chelated for maximum bio-availability, Supa Trace Advance, including boron, delivers nine essential nutrients that your turf needs to reach its full potential



BENEFITS OF SUPA TRACE ADVANCE

- ✓ Replenishes the plant with fundamental trace elements that are vital for healthy growth in turf grass
- ✓ Chelation of the nutrients increases plant availability and rate of uptake
- ✓ Contains nitrogen which also assists plant uptake
- ✓ A well balanced mix of essential elements which maintain plant health and reduce the potential for deficiencies
- ✓ Completely soluble delivering the required amount of nutrients with low application rates
- ✓ Clear solution makes it easy to decant into spray equipment, mixing tanks and irrigation
- ✓ Can be applied with a wide range of other agricultural products, reducing the number of spray applications needed

THE IMPORTANCE OF TRACE ELEMENTS

Trace element deficiencies usually occur in low CEC sand profiles, or in new constructions. Trace elements are minor in turf requirement, but not minor in importance. In contrast to nitrogen (N), phosphorus (P) and potassium (K), they are required by turfgrass in significantly lower quantities, however their importance should not be underestimated. Many trace elements function as essential parts of enzymes in the cell. Important enzymes consist of proteins which attach to co-enzymes, generally containing trace elements. The control of cellular processes through chemical reactions is done through enzymes. Turfgrass health is determined by its most limiting factor (or nutrient), so it is important that levels of all nutrients, primary or trace, are at sufficient levels to satisfy the plant demand.

Product Characteristics

Specific Gravity: 1.285 **Colour:** Clear emerald green

Analysis	Australia (w/v%)	International (w/w%)
Nitrogen (N)	3.3	2.5
Iron (Fe)	1.6	1.2
Zinc (Zn)	1.8	1.4
Magnesium (Mg)	1.4	1.1
Manganese (Mn)	1.3	1.0
Copper (Cu)	0.6	0.5
Sulphur (S)	4.8	3.7
Boron (B)	0.6	0.5
Molybdenum (Mo)	0.03	0.02

Directions for use

Agitate contents well before dilution. Suitable for application by:



CROP	RATE / ha	MIN DILUTION*	COMMENTS
TURF	200 ml / 100 m ²	1:10	As required to maintain turf quality and boost trace element levels



MINIMUM DILUTION : A dilution of 1 : 100 means 1 part product : 100 parts water.

In hot weather, use the higher dilution rates. * AERIAL APPLICATION: use maximum practical water rates.

NOTE: When applying in alkaline conditions (water and/or soil), ensure ratio to water is 1 : 1000]

WARNING: DO NOT apply SUPA TRACE ADVANCE with copper sprays or onto plants with copper residues

NOTE: The suggested rates of application are designed for typical Australian conditions and such should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf (sap) tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.



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SUPATM IRONTM ADVANCE TURF

**7% Iron, 16% Nitrogen, 1% Manganese
+ Nitrification Inhibitors**

Complexed iron formulation for the rapid correction of iron deficiencies and maintenance of growth in turfgrass

Specifically developed for foliar applications to enhance turf appearance by maintaining a deep green colour

Benefits of Nitro-Iron AdvanceTM Turf

- High analysis formulation of iron and nitrogen provides “bang for your buck”
- Highly available form of iron rapidly corrects iron deficiency
- Efficient application with a quick green-up response
- 100% soluble and stable due to unique formulation
- Can be applied by foliar spray or by fertigation for rapid uptake
- Added nitrification inhibitors for efficient nitrogen utilisation

THE ROLE OF IRON AND MANGANESE

Turfgrass needs iron to produce chlorophyll and both iron and manganese are required to activate several enzymes, particularly those involved in photosynthesis and respiration, and in the case of manganese, those associated with nitrate assimilation and chlorophyll production.

THE ROLE OF NITROGEN

Nitrogen is the major building block in protein and chlorophyll. It is also essential for lipid and cytoplasm formation. Highly mobile in the plant, it is translocated and utilised in the growing tips. Nitrogen is vital to turf growth but can be a limiting factor in uptake of other nutrients.

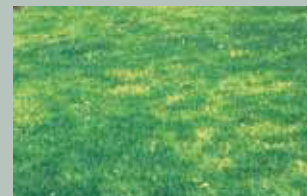
Nitrogen is often leached from the soil therefore regular application in low doses will ensure efficient uptake without excessive losses.



DEFICIENCY SYMPTOMS

IRON

The youngest leaves develop a light green chlorosis of tissue between the veins, while the veins remain green. In severe cases leaves will be yellow or white. As iron has poor mobility older leaves may remain green.



Iron deficiency on turf

MANGANESE

Pale green blotches develop between main veins which remain dark green. The interveinal chlorotic areas become pale green or dull yellow. Reports show that turfgrass can become more susceptible to root diseases.

Photo references
1- Nutrient Deficiencies and Toxities in Plants (CIR)
(APS Press)

Product Characteristics

Specific Gravity: 1.30 **Colour:** Brown black liquid


SHAKE WELL BEFORE USE


Analysis	Australia (w/v%)	International (w/w%)
Nitrogen (N)	16	12.3
Iron (Fe)	7	5.4
Manganese (Mn)	1.0	0.8
Nitrification Inhibitors		

Directions for use

Agitate contents well before dilution Suitable for application

 Foliar	 Fertigation
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CROP	Rate/ha	MIN DILUTION 	COMMENTS
GREENS	20L 200 ml / 100m ²	1 : 20	Apply as required for fast, long lasting green-up
TEES, FAIRWAYS, SPORTSFIELDS	20 - 50 L 200 - 500 ml / 100m ²	1 : 20	Apply as required for fast, long lasting green-up

 **MINIMUM DILUTION :** A dilution of 1 : 100 means 1 part product 100 parts water.
In hot weather, use higher dilution rates.



ULTIMATE N TURF

NPKS 37-0-0-0
+ activated Humic acid & bio effectors

Highly concentrated liquid nitrogen and humic acid complex complemented with bio effectors for reduced leaching, boosting nitrogen levels of turf, enhanced root growth and improved plant health

BENEFITS OF ULTIMATE N TURF

- The bio effector present in this product enters turf cells and triggers pattern recognition receptors which affects several bio mechanical pathways and enhances gene expression whilst regulating the way these genes are converted to proteins. 74 genes are triggered by the bio effector enhancing root development, protein development, nutrient uptake and stress tolerance such as heat stress, drought stress and salinity stress.
- Activated Humic acids and bio effectors for enhanced Nitrogen uptake, turf growth & soils health.
- Reduced volatilization, for greater Nitrogen use efficiency in turf
- Fortified with controlled release nitrogen stabilizers to reduce nitrate leaching and balance turf growth for an extended period of time approximately 4 to 6 weeks.
- Suitable for greens, tees and fairways.
- Activated Humic acids maintain and improves turf rooting, soil physical and chemical properties.

THE IMPORTANCE OF NITROGEN IN TURF

Nitrogen increases the greenness and growth of turf including greens, tees and fairways. Nitrogen requirements are different for these sections of golf course, therefore, care must be taken to apply the required amount of nitrogen to avoid high frequency of mowing. Nitrogen is the essential building block of turf structure and function, vital to growth. Nitrogen is often leached from the soil therefore regular small applications of controlled release Nitrogen ensure optimal colour without excessive mowing and leaching losses.

THE IMPORTANCE OF ACTIVATED HUMIC ACID IN TURF

Activated Humic acid assist the penetration of nutrients into turf roots more efficiently therefore reduce applications can be maintained throughout the growth period. Humic acid, the active constituent of humus, plays an important role in nutrient availability, cation exchange, microbial activity, water-holding capacity and soil structure improvement.

WHY ULTIMATE N TURF?

Ultimate N Turf is a stabilised high nitrogen product which sustains controlled growth of turf in all stages of growth. Ultimate N Turf is designed to stimulate green colour, controlled turf growth including the growth of greens, tees and fairways throughout the year. One major advantage of this product is that no follow-up rain irrigation is required after application, because of its liquid formulation and high absorption rate in soils.

ULTIMATE N TURF

CHARACTERISTICS: pH: 7.0 - 8.0; Specific Gravity: 1.32 - 1.33

AUS Analysis W/V%: 37.3% N, Humic acid: Activated (proprietary).

International Analysis W/W%: 28.3% N, Humic acid: Activated (proprietary)

APPLICATION

TURF: Apply as a spray application during the growing season on all turf grasses and many landscape plants. Dilute with water, using the desired nitrogen rate per 100m² according to the application table below. Apply insufficient water to achieve adequate turf coverage. Use a water volume of 8 - 20L per 100m² (800 - 2000 L/ha), depending on the application rate. **DO NOT apply when temperature exceeds 27 C.** Avoid mowing for 24 hours following an application.

During warming conditions irrigate 2 - 4 mm water within 24h of application.

APPLICATION RATE TABLE	
kg N 100m ²	ml 100m ²
0.10	270
0.15	400
0.21	550
0.26	700

Fertigation rates are dependent on seasonal nutrient demand. Agitate contents well prior to application.

If the turf growth rate becomes excessive under warm conditions, reduce the application rate by 10 - 30%, as required. This is necessary because the golf course topography, microclimate and turf species may be different.

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NOTE: The suggested rates of application of the Product are designed for typical Australian conditions and should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.

TURF

CATALOGUE

VICENTIA

EAST AFRICA



P.O. Box 71212 - 00622, Nairobi

 **0706 500 800**

 **info@vicentiaea.com**

 **www.vicentiaea.com**

Connect with us:    

