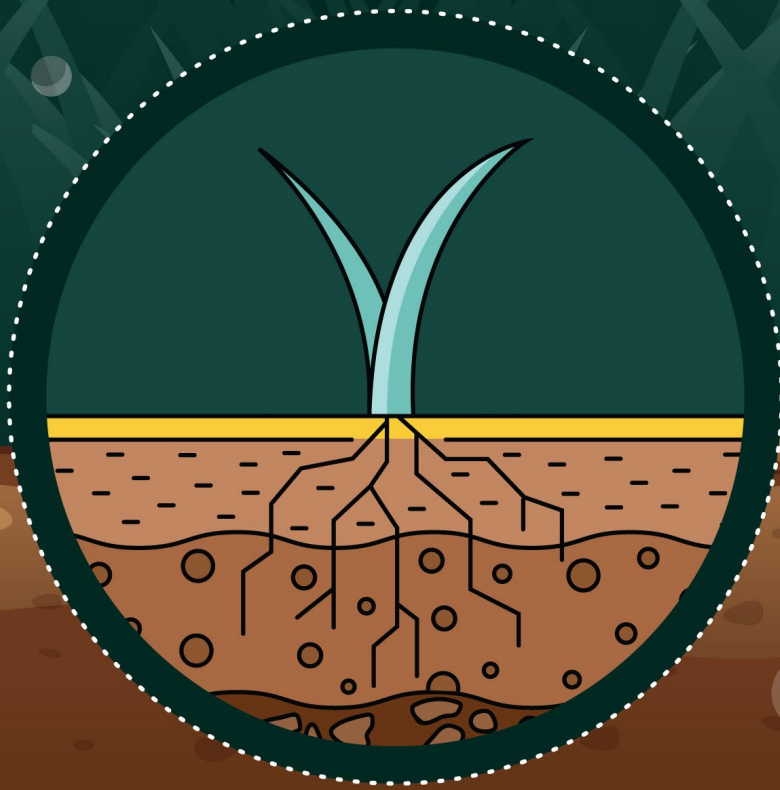




ABUNDIGRO
pure performance



**FOR
PREMIER TURF
PERFORMANCE**

ABUNDIGRO

Turf Performance Programs

Simple and effective solutions to improve your turf's health, appearance, and resilience. Follow these straightforward programs for exceptional results on your greens and pitches.



Soil Drench Conditioning Program

Purpose

Rebuilds soil health, microbial balance, and sustained turf resilience from the root zone up.



Key Benefits

1. Consistent turf performance and durability.
2. Improved drainage, colour, and resilience.
3. Healthier soil with better nutrient uptake.



Usage per Application

PER HA

OXYTURF

10ℓ - 20ℓ

Breaks compaction, oxygenates soil profile.

BATTALION

50mℓ

Adds beneficial bacteria for healthier soil.

UKELP

5ℓ

Boosts root growth and stress relief.

MANNA

10ℓ

Provides balanced, organic nutrition.

SUPER SURFER

5ℓ

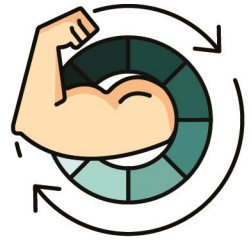
Improves infiltration and nutrient movement.



How Often

Apply every 3-4 weeks

Wash in with 3-5 mm of irrigation or light rainfall, ideally early morning or late afternoon.



Foliar Pre-Match Stress Relief Spray Program

Purpose

Rapidly enhances turf health, colour, and stress resilience ahead of high-impact play.



Key Benefits

1. Vibrant, lush turf with a professional appearance.
2. Stronger, more durable turf under heavy use.
3. Fast preparation for top-level play.



Usage per Application

PER HA

OXYTURF

10ℓ

Clears compaction and improves drainage.

CHAMPION

10ℓ

Intensifies turf colour and vitality.

UKELP

5ℓ

Promotes recovery and root-zone health.

GLADIATOR

1ℓ

Strengthens turf and boosts recovery.

SUPER SURFER

500mℓ

Enhances spray efficiency and coverage.

MANNA

10ℓ

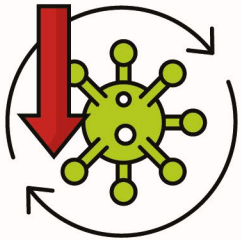
Provides balanced, organic nutrition.



How Often

Every 3 - 4 weeks, 10 - 14 days after Soil Drench.

Spray during cool morning or late afternoon; irrigate next day with 3-5 mm to wash in residue.



Disease Suppression Program



Purpose

Prevent diseases and build a healthier soil environment.



Key Benefits

1. Reduced disease pressure and healthier turf.
2. Stronger, more resilient roots and plants.
3. Improved soil health and long-term performance.



Usage per Application PER HA

OXYTURF

20ℓ

Oxygenates the soil to fight anaerobic conditions.

BATTALION

50mℓ

Suppresses harmful pathogens and enhances microbial activity.

UKELP

5ℓ

Builds resilience and supports healthy roots.

GLADIATOR

1ℓ

Reinforces cell walls to reduce stress.

SUPER SURFER

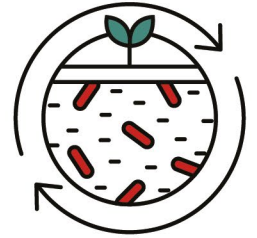
500mℓ

Improves spray application and product absorption.



How Often

Apply monthly or as needed.



Thatch Degradation & Black Layer Program



Purpose

Break down thatch and eliminate black layer for a cleaner, healthier soil profile.



Key Benefits

1. Faster thatch breakdown and improved drainage.
2. Healthier soil with better water flow.
3. Cleaner, more breathable soil profile.



Usage per Application PER HA

OXYTURF

20ℓ - 40ℓ

Clears compaction and improves drainage.

BATTALION

50mℓ

Adds beneficial bacteria for healthier soil.

UKELP

5ℓ

Promotes recovery and root-zone health.

SUPER SURFER

500mℓ

Enhances spray efficiency and coverage.



How Often

Every 4-6 weeks or as needed.

Simple Instructions for All Programs

1. Mix products in the recommended order, starting with water and adding each product gradually.
2. Follow the dilution rates provided.
3. Apply evenly using a sprayer or irrigation system.
4. Adjust frequency based on turf condition and seasonal needs.

WHY CHOOSE ABUNDIGRO PROGRAMS?

Simple and Effective:

Easy-to-follow steps for superior results.

Scientifically Backed:

Products designed to solve real turf challenges.

Trusted by Professionals:

Used by top groundsman and greenkeepers across the industry.

PRODUCT INDEX

Increased Root Zone Oxygenation

Thatch Degradation

Improved Percolation



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Root Growth

Stress Tolerance

Soil Health



Page 6

Balanced Nutrition

Soil Structure Improvement

Microbial Diversity



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Water Penetration Improvement

pH Buffering

Foliar Nutrient Absorption



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Page 5

Colour Enhancement

Stress Resilience

Nutrient Efficiency



Page 7

Structural Integrity

Stress Resistance

Nutrient Absorption

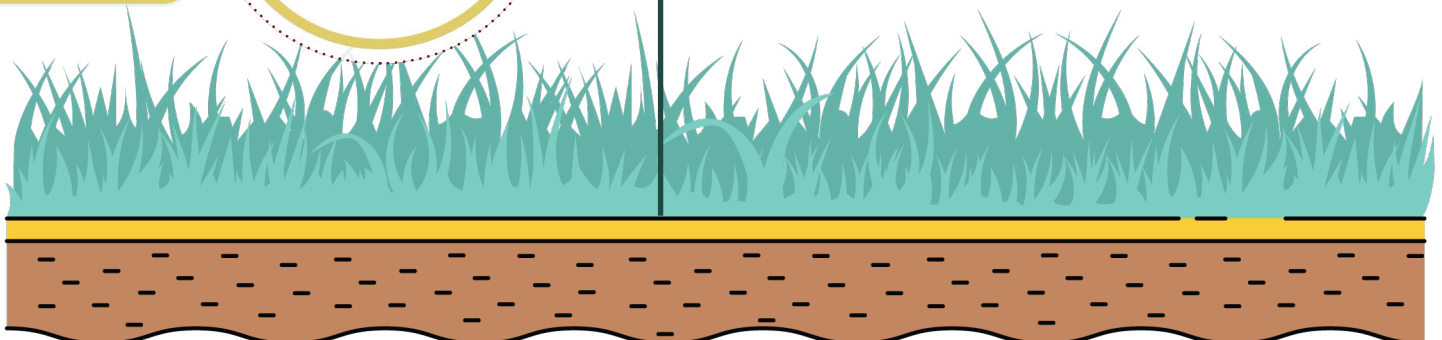


Page 9

Disease Suppression

Root Strengthening

Nutrient Efficiency





WHAT IS OXYTURF?

OxyTurf offers an innovative approach to boosting sports turf performance by enhancing soil aeration, nutrient uptake, and turf health. This advanced solution optimizes soil structure, water percolation, and microbial activity, leveraging oxygen release to revitalize and enrich soil and turf health and performance. OxyTurf leverages the natural power of oxygen release to rejuvenate and enrich soil, making it more fertile and productive.

BENEFITS

- **Enhanced Soil Aeration:** Promotes optimal oxygen levels in soil for vigorous root development.
- **Improved Water Percolation:** Facilitates efficient water infiltration, reducing surface waterlogging.
- **Organic Breakdown:** Accelerates organic matter breakdown, mitigating thatch build-up for healthier turf.
- **Compaction Relief:** Alleviates soil compaction, enhancing porosity and root penetration.

MODE OF ACTION

- **Oxygen Release:** Stabilized oxygen formulation increases soil oxygenation, stimulating aerobic microbial activity.
- **Organic Decomposition:** Catalyzes the breakdown of organic matter, improving nutrient availability and soil structure.
- **Enzymatic Activation:** Invokes peroxidase enzymes, facilitating the conversion of organic compounds, enhancing soil fertility.
- **Microbial Stimulation:** Encourages beneficial microbial growth, vital for nutrient cycling and root health.

ENVIRONMENTAL IMPACT

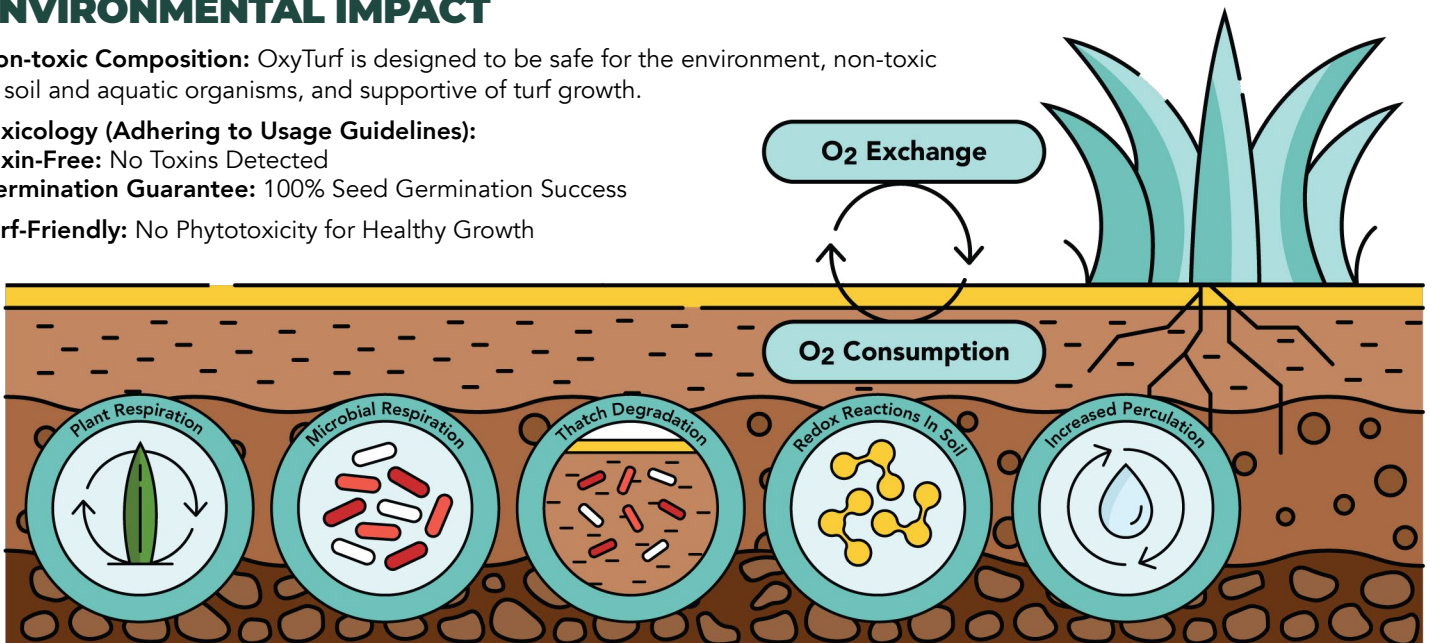
Non-toxic Composition: OxyTurf is designed to be safe for the environment, non-toxic to soil and aquatic organisms, and supportive of turf growth.

Toxicology (Adhering to Usage Guidelines):

Toxin-Free: No Toxins Detected

Germination Guarantee: 100% Seed Germination Success

Turf-Friendly: No Phytotoxicity for Healthy Growth



COLOUR & APPEARANCE:

Cloudy clear.

APPLICATION RATE & INSTRUCTIONS

10 - 20ℓ per Ha

Soil Drenching: Apply OxyTurf at a rate of 10 to 20 liters / hectare once per month using soil drenching techniques. This helps improve soil aeration, percolation, and thatch degradation, leading to healthier, more resilient turf.

Foliar Spray: Apply OxyTurf at a 5% concentration as a foliar spray to enhance systemic acquired resistance and support overall turf health. This method helps in reducing disease pressure and improving turf vigor.

COMPATIBILITY

OxyTurf can be used safely in conjunction with all products that do not disrupt beneficial biological interactions within the soil and turf ecosystem.

Product of Makro Organics **makro organics**



CHAMPION

Soil Conditioner

WHAT IS CHAMPION?

Champion serves the sports turf sector as a nutrient-rich protein cocktail, specifically designed to enhance turf vitality, colour, quality, and performance through organic means. Comprising 55% protein hydrolysate, 21% fulvic acid, 21% Ukelp, flavonoids from Genesis C4L Technology, and citric acid, Champion provides a comprehensive nutrient boost. It ensures a balanced supply of essential amino acids and microelements for optimal turf health.

BENEFITS

- **Enhanced Chlorophyll Density:** Champion boosts chlorophyll production, resulting in a darker green turf with increased photosynthetic efficiency.
- **Systemic Acquired Resistance (SAR) Activation:** Specialized flavonoids that trigger SAR, priming the plant's immune response and enhancing natural disease resistance.
- **Antioxidant Defense and Stress Tolerance:** Champion's flavonoids, combined with fulvic acid, act as antioxidants that reduce oxidative damage, supporting resilience against abiotic stressors like drought and heat.
- **Optimized Nutrient Uptake and Root Health:** Fulvic acid and seaweed extract enhance nutrient availability and uptake, promoting robust root growth and improving soil-plant interactions in the rhizosphere.

MODE OF ACTION

- **Flavonoid Activation through Genesis C4L Technology:** Genesis C4L's unique flavonoids interact with plant signalling pathways, triggering defence and growth responses at the cellular level.
- **Hormone Regulation for Growth and Resilience:** The seaweed component supports natural auxin and cytokinin balance, aiding root development and turf resilience under stress.
- **Microbial Synergy in the Rhizosphere:** Champion supports beneficial microbial populations, enhancing soil structure and nutrient cycling through increased microbial activity.
- **Stress Signaling and Defense Activation:** Bioactive compounds activate stress signalling pathways, preparing turf for abiotic challenges and maintaining consistent plant health.

COLOUR & APPEARANCE:

Golden brown.

APPLICATION RATE & INSTRUCTIONS

10ℓ per Ha

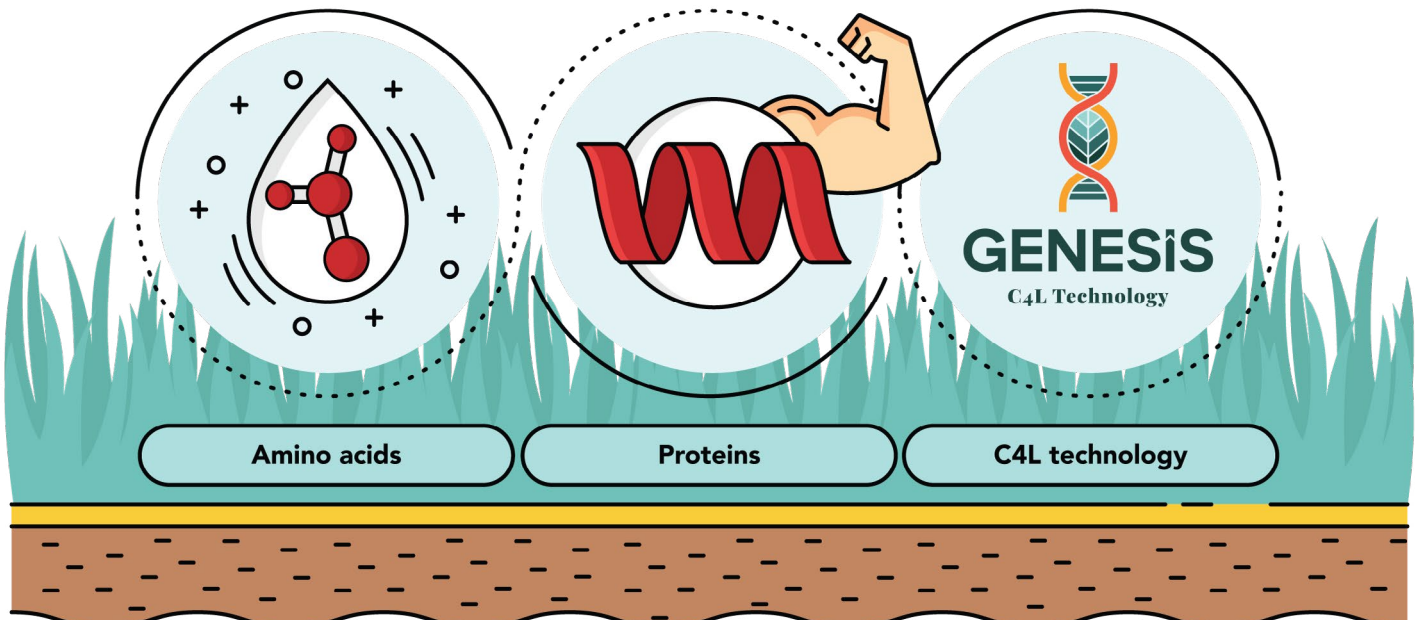
Dilute and apply 10ℓ per Ha monthly, suitable for both foliar application and soil incorporation to meet the specific needs of various grass types.

COMPATIBILITY

Champion can be used safely in conjunction with all products that do not disrupt beneficial biological interactions within the soil and turf ecosystem.



COMPLIANCE: Approved for restricted use in organic systems in accordance with EC regulation 834/2007 and 889/2008 by Organic Farmers & Growers.



WHAT IS UKELP?

Ukelp, a cold-pressed *Ecklonia maxima* kelp suspension, optimizes greenkeeping and groundsman productivity by enhancing turf grass performance and resilience to abiotic stress, while also improving soil health. This solution enriches grass with amino acids, polysaccharides, betaines, and sterols, essential for growth and stress management, thereby promoting robust root and sward development in diverse sports turf settings.

BENEFITS

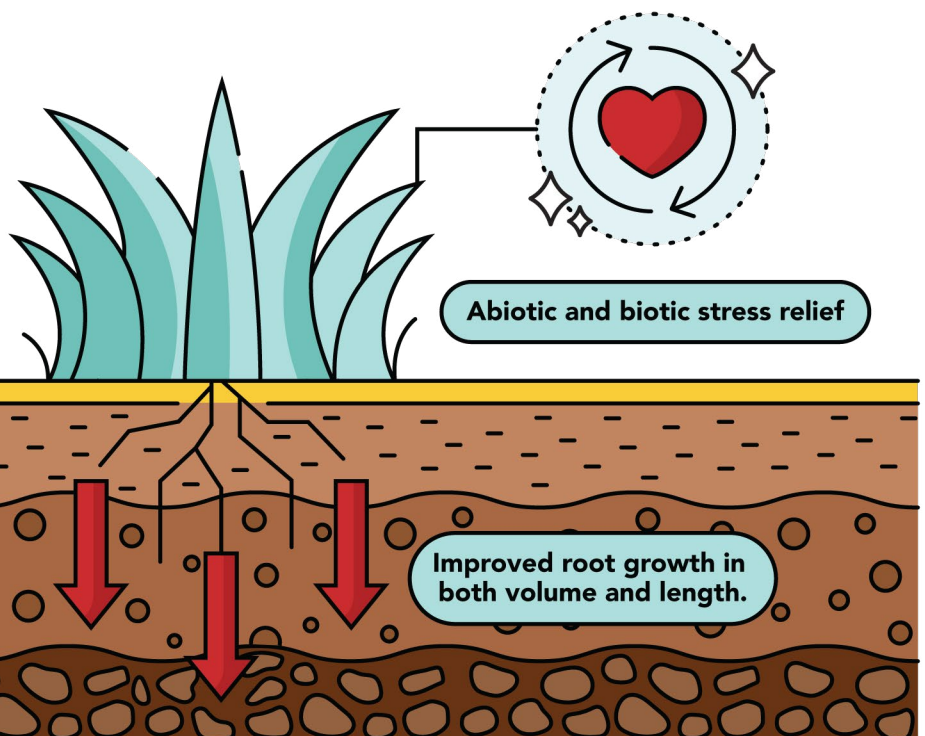
- **Enhances Turf Performance:** Boosts productivity through nutritional optimization, supporting healthier, more vigorous plant growth.
- **Mitigates Abiotic Stress:** Provides resilience against environmental stressors such as drought, salinity, and temperature fluctuations.
- **Improves Soil Health:** Enriches soil with organic matter, enhancing its structure and nutrient-holding capacity.
- **Promotes Sustainable Turf Management:** Supports eco-friendly practices with its natural, biodegradable composition.

MODE OF ACTION

- **Nutrient Delivery:** Supplies essential micronutrients, amino acids, and improves growth hormone synthesis.
- **Stress Resistance:** Triggers stress resistance pathways, enhancing plant tolerance to adverse abiotic and biotic stress conditions.
- **Soil Microbial Activity:** Stimulates beneficial soil microbes, improving nutrient cycling and root development.
- **Root and Shoot Development:** Encourages vigorous root and shoot growth through natural growth promoters and hormonal activity.



Approved for use in organic systems in accordance with EC regulations 834/2007 and 889/2008 by Organic Farmers & Growers



COLOUR & APPEARANCE:

Green liquid. Suspension concentrate.

APPLICATION RATE & INSTRUCTIONS

3 - 10ℓ per Ha

Apply 3 to 10ℓ per Ha depending on turf grass requirements. Apply as foliar spray or soil drench every 2 - 4 weeks.

COMPATIBILITY

Ukelp can be used safely in conjunction with all products that do not disrupt beneficial biological interactions within the soil and turf ecosystem.



GLADIATOR

Shield. Strengthen. Succeed

WHAT IS GLADIATOR?

Gladiator offers unmatched support for structural turf health, optimising nutrient absorption and resilience against environmental stressors in sports turf. Featuring a unique blend of monosilicic acid, Boron, and Calcium, Gladiator is crucial for healthy sports turf development.

BENEFITS

- **Structural Integrity and a firmer playing surface.:** Strengthens cell walls and vascular system for better water management.
- **Stress Resistance:** Enhances the impermeability of turf cell walls against fungal attacks.
- **Calcium Uptake:** Facilitates rapid absorption of calcium, improving turf health and produce firmness.
- **Nutrient Efficiency:** Increases nutrient uptake, ensuring healthier turf growth.
- **100% Bioavailable Silicon:** Provides a stable, plant-accessible form of silicon for immediate benefits.

MODE OF ACTION

- **Nutrient Management:** Facilitates absorption and transport of essential nutrients such as Calcium, Phosphorus, Potassium, Magnesium, and others, promoting balanced turf nutrition.
- **Calcium Correction:** Rapid solution for Calcium deficiencies, fast uptake enhancing cell wall and vascular system integrity.
- **Resistance Enhancement:** Silicon deposition in the turf grass cuticle strengthens defense against fungal, bacterial, and insect attacks by bolstering the turf's natural barriers.
- **Transpiration Reduction:** Minimizes leaf epidermal transpiration, optimizing internal water management.

COLOUR & APPEARANCE:

Clear liquid.

APPLICATION RATE & INSTRUCTIONS

500mℓ per Ha

Monthly schedule and or as a pre match spray, 3 days prior to match day.

Dilution for Spray:

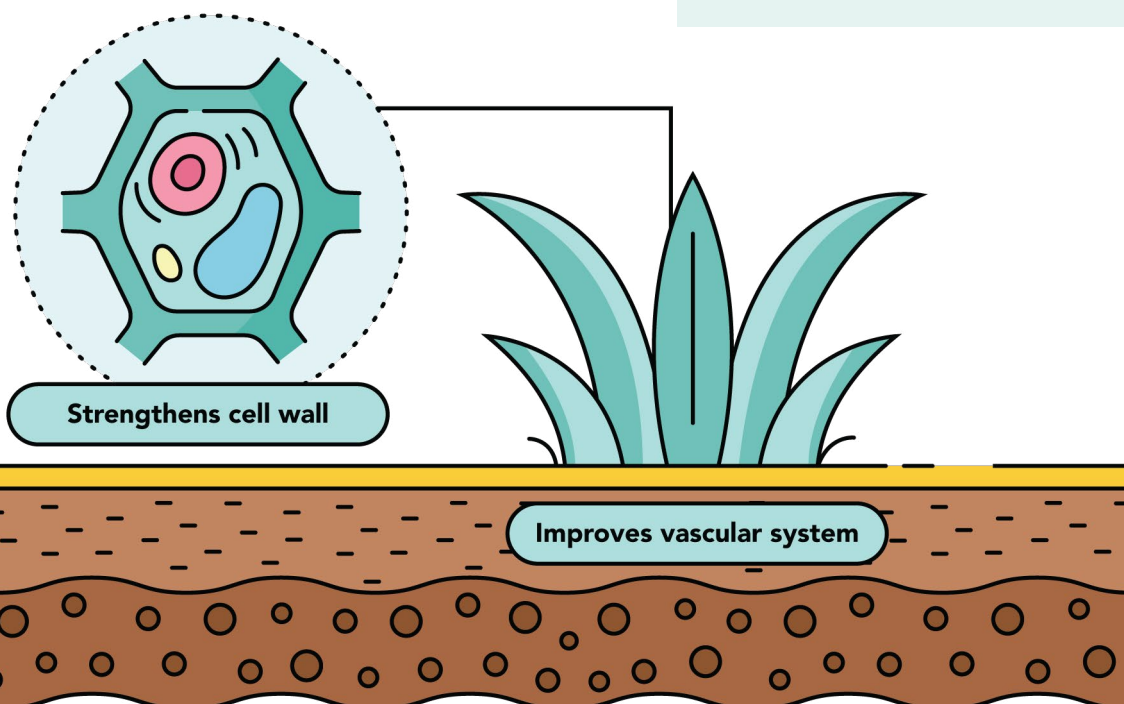
Mix in 300 - 1 000ℓ of water per Ha. Add Gladiator to water while stirring, then add other foliar products as necessary. Use within 4 hours.

Root application dilution:

Weekly use at 1:5 000 dilution; for every watering, dilute 1:10 000.

COMPATIBILITY

Gladiator seamlessly integrates with conventional foliar treatment regimens.





MANNA
Natures Nurturing Nutrition

WHAT IS MANNA 9:4:7?

Manna 9:4:7 is a highly effective, organic-based sportsturf liquid biostimulant. It is formulated to provide essential nutrients, enhance turf resilience, and improve soil health. The product integrates cutting-edge Genesis C4L technology and a consortium of beneficial Bacillus strains, optimized to support vigorous plant growth.

BENEFITS

- Enhances nutrient uptake and efficiency
- Improves stress tolerance against abiotic and biotic factors
- Promotes robust root development and plant growth
- Increases yield and improves crop quality
- Improves photosynthesis and up and down gene regulation
- Enhances soil structure and microbial activity
- Reduces dependency on chemical inputs

MODE OF ACTION

Manna 9:4:7 works through several mechanisms:

- **Nutrient Supply:** Directly provides essential macro and micronutrients.
- **Root Stimulation:** Amino acids and seaweed extracts enhance root growth and function.
- **Soil Health:** Humic and fulvic acids improve soil structure and nutrient availability.
- **Stress Resilience:** Genesis C4L technology induces systemic acquired resistance in plants, enhancing tolerance to stress and improves photosynthesis.
- **Microbial Enhancement:** Bacillus strains promote a healthy soil microbiome, aiding in nutrient cycling and disease suppression.

CHEMICAL ANALYSIS:

N (Total Nutriegen - DUMAS)	8.62%	Na (Sodium)	3163 mg/kg	Zn (Zinc)	1310 mg/kg
Fulvic Acid	6%	S (Sulphur)	1.08%	B (Boron)	515 mg/kg
Humate	13%	P (Phosphorus)	4.65%	Mo (Molybdenum)	173.18 mg/kg
Ca (Calcium)	0.04%	Fe (Iron)	1024 mg/kg	pH	3.9
Mg (Magnesium)	0.86%	Mn (Manganese)	793 mg/kg	Calculated Carbon	23.73%
K (Potassium)	6.02%	Cu (Copper)	183 mg/kg	Ash	20.39%

COLOUR & APPEARANCE:
Dark brown, homogeneous liquid.

APPLICATION RATE & INSTRUCTIONS

General rate: 10 - 20ℓ per Ha

Application timing: Apply Manna bi-weekly or monthly to optimize nutrient uptake and stress resilience.

Method: Suitable for both foliar application and soil drenching.

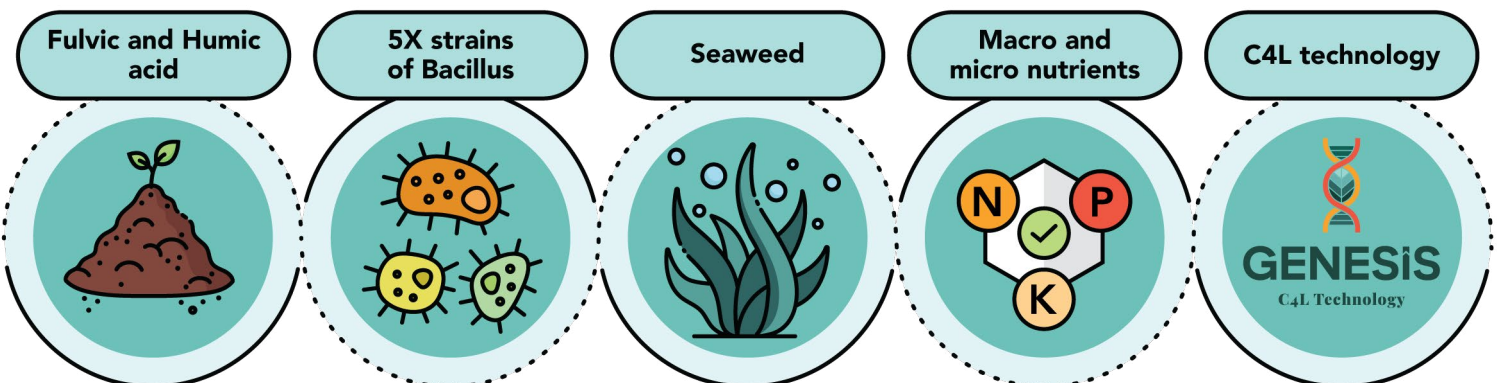
Frequency: Bi-weekly, monthly, or as needed based on turf requirements and environmental conditions.

COMPATIBILITY

Manna 9:4:7 is compatible with most common sports turf amenity inputs. However, it is advisable to conduct a jar test or consult with a technical advisor when mixing with other chemical agents for the first time. Avoid mixing with highly acidic or alkaline products without prior testing.



COMPLIANCE: Approved for restricted use in organic systems in accordance with EC regulation 834/2007 and 889/2008 by Organic Farmers & Growers.





BATTALION

Microbes That Matter

WHAT IS BATTALION?

Battalion is a powerful microbial soil health inoculant designed for professional use in enhancing the vitality of all soil types across various grass species. Formulated with a proprietary blend of Plant Growth Promoting Rhizobacteria (PGPR), Battalion is engineered to improve plant health by stimulating natural defence mechanisms, increasing nutrient availability, and promoting robust growth. It is particularly effective in environments where disease suppression and enhanced growth are critical.

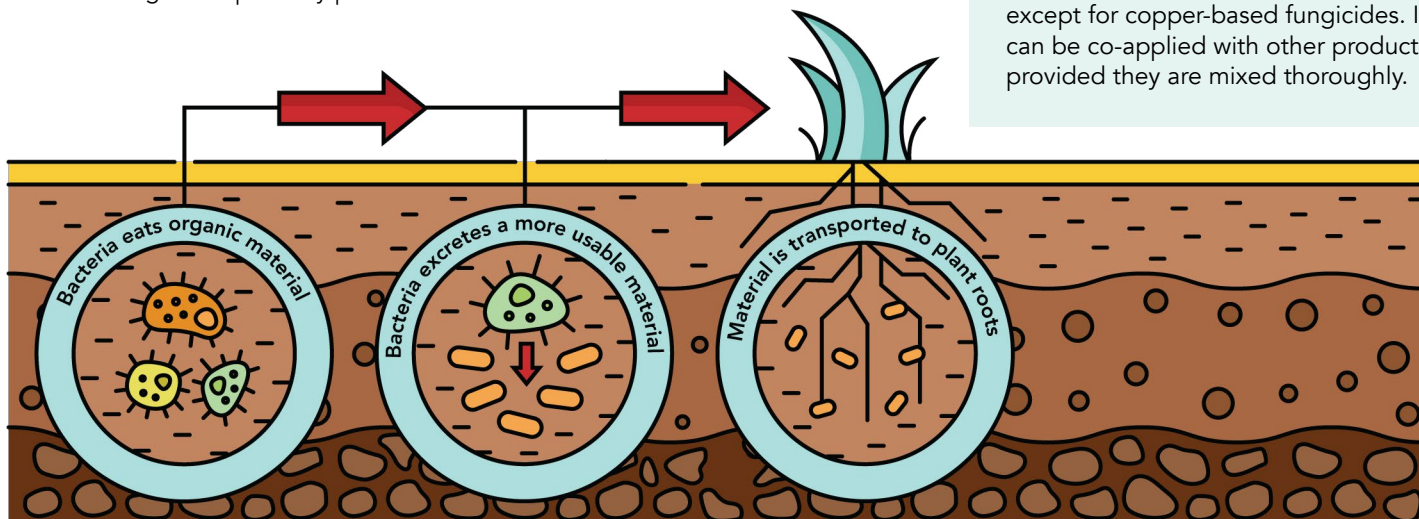
BENEFITS

- **Enhanced Growth:** By colonizing the rhizosphere, Battalion stimulates root and plant tissue development, leading to stronger, healthier plants.
- **Disease Suppression:** The microbial content in Battalion produces biofilms and beneficial enzymes that suppress common soil pathogens, reducing disease incidence.
- **Nutrient Solubilization:** Battalion's PGPR strains solubilize phosphorus and fix nitrogen, making essential nutrients more available to plants.
- **Stress Resistance:** The biofilm produced by Battalion helps plants recover faster from stress events, such as drought or frost, by facilitating the uptake of nutrients and water.
- **Sustainable Farming:** Regular use of Battalion reduces the need for chemical fertilisers and pesticides, supporting more sustainable agricultural practices.

MODE OF ACTION

Battalion works through several complementary mechanisms:

- **Disease Suppression:** The PGPR strains in Battalion produce salicylic acid, which triggers the plant's systemic acquired resistance (SARS) response. This leads to the production of natural antibiotics within the plant, inhibiting pathogen growth.
- **Nutrient Solubilization:** The microbes in Battalion release siderophores that bind to iron and other micronutrients, making them more available to plants. They also produce enzymes that convert insoluble phosphorus into forms that plants can readily absorb.
- **Biofilm Formation:** Battalion's microbes form a protective biofilm around the root zone, acting as a barrier against harmful pathogens while also stabilizing nutrients and enhancing their uptake by plants.



COLOUR & APPEARANCE:

Light amber colour.

ACTIVE INGREDIENTS:

Battalion has five different strains of *Bacillus* species: 4×10^{10} cfu/ml

These strains are selected for their ability to enhance plant growth and suppress soil-borne diseases.

Bacillus amyloliquefaciens

Bacillus laterosporus

Sub-species of *B. laterosporus*

Bacillus licheniformis

Sub-species of *B. licheniformis*

APPLICATION RATE & INSTRUCTIONS

50 ml per Ha

Apply 50 ml per hectare as a soil drench or in-furrow application.

Battalion can be applied at any time during the growing season, depending on the turf needs.

For optimal results, repeat the application every 3-4 weeks throughout the growing season.

COMPATIBILITY

Battalion is compatible with most liquid fertilisers and agricultural chemicals, except for copper-based fungicides. It can be co-applied with other products, provided they are mixed thoroughly.



SUPER SURFER

Better Wetter Buffer

WHAT IS SUPER SURFER?

Super Super revolutionises foliar application techniques in turf management, ensuring uniform nutrient delivery and optimal turf health. As a naturebased surfactant, Super Surfer enhances foliar application efficiency, offering improved coverage, nutrient absorption, and pH adjustment for optimal turf health.

BENEFITS

Super Surfer serves to enhance the quality and wetting ability of irrigation water, vital for optimizing the effectiveness of foliar sprays. By lowering both the pH level and surface tension, it guarantees improved wettability of the foliar spray and facilitates deeper water penetration.

MODE OF ACTION

Enhanced Spread ability: Improves spray distribution and soil water penetration, ensuring uniform application.

pH Optimization: Buffers spray and irrigation water to pH 5.5, enhancing foliar feed efficacy.

Nutrient Enrichment: Supplies vital macronutrients (N, P) for turf nourishment and growth.

Wetting Efficiency: Lowers surface tension for better wettability and deeper irrigation water penetration

COLOUR & APPEARANCE:

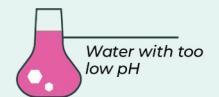
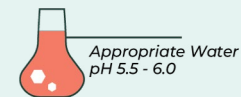
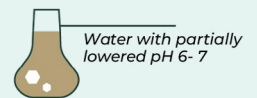
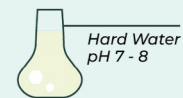
Dark red liquid.

APPLICATION RATE & INSTRUCTIONS

80-120ml per 100ℓ of water

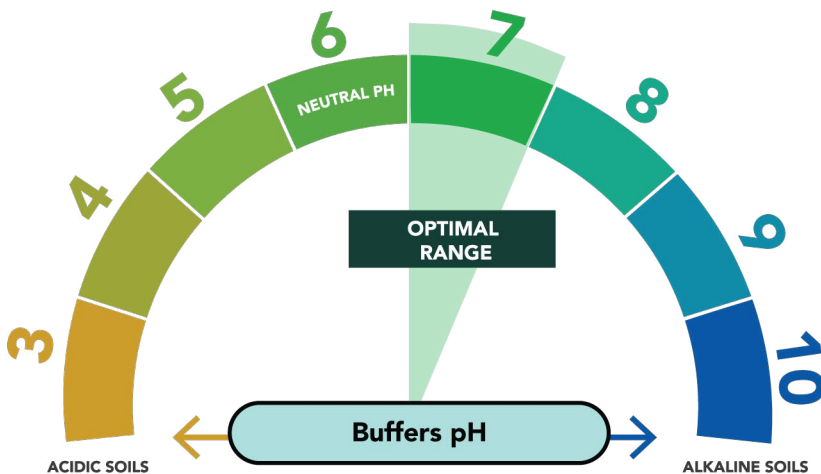
For optimal results, use an average of 80-120ml of Super Surfer per 100ℓ of water.

1. Fill the spray tank to **50% with water** before adding Super Surfer.
2. Observe the **change of colour** of the solution to slightly pink.
3. Depending on the hardness of the water, you should add the amount of product that will lead to the **desired pH of the water** – about 5.5.
4. To do this, follow the colour scale given at the bottom of the label.
5. If you are not able to determine the colour gradient 100ml per 100ℓ is the average application rate.

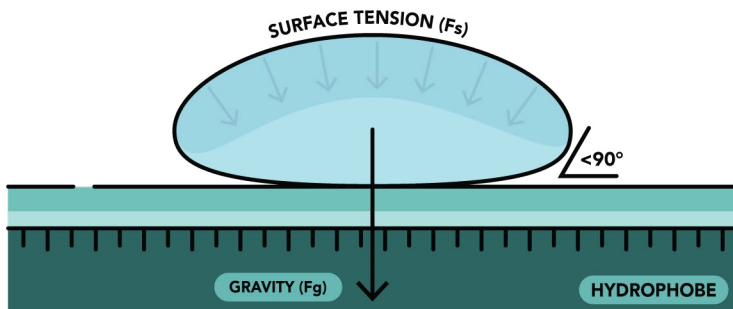


COMPATIBILITY

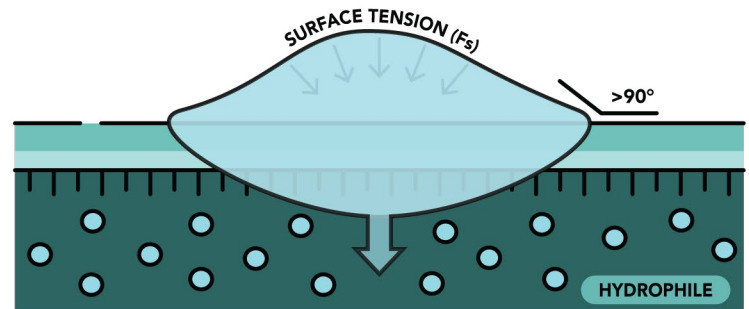
Super Surfer can be also used with all foliar fertilisers and pesticides, and organic bio-stimulants.



Poor wetting properties



Good wetting properties





ABUNDIGRO
pure performance

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