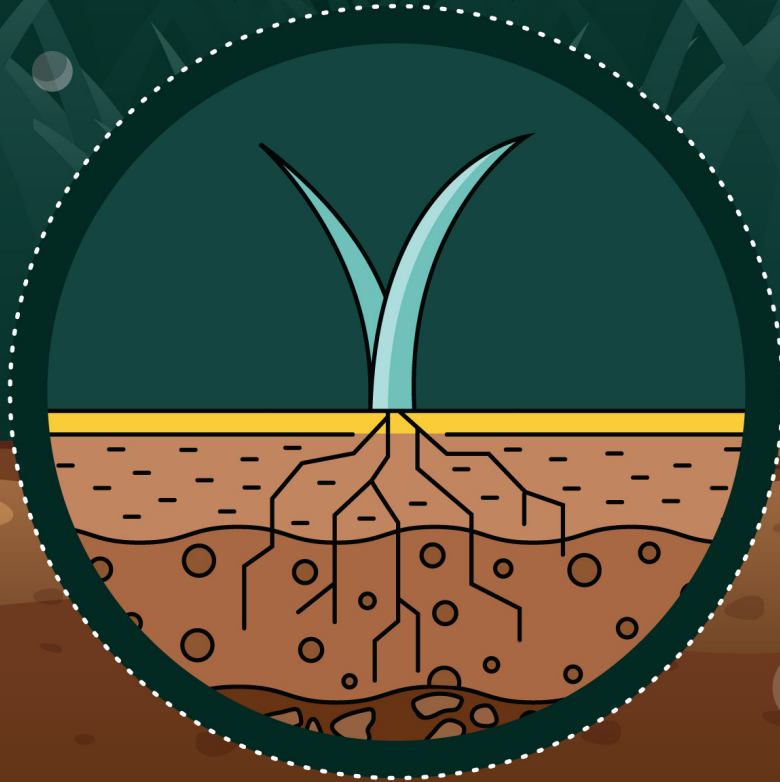




**ABUNDIGRO**  
nurturing soil biology



# SPORTS TURF PRODUCT PORTFOLIO



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

**ABUNDIGRO**

### Nutrient Management:

Facilitates absorption and transport of essential nutrients, promoting balanced turf nutrition.

### Calcium Correction:

Rapid solution for Calcium deficiencies, fast uptake enhancing cell wall and vascular system integrity.

### Resistance Enhancement & Transpiration Reduction:

Strengthens defense against fungal, bacterial, and insect attacks by bolstering the turf's natural barriers and reduces transpiration.

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6



## GLADIATOR

Mono-silicic acid with boron and calcium



## UKELP

Atlantic Kelp Seaweed

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5

### Abiotic and Biotic Stress Mitigation

Seaweed-derived polysaccharides enhance SAR and ISR, protecting against environmental stressors and pathogens.

### Stimulated Root Growth

Promotes root elongation and branching.

### Photosynthetic Efficiency

Increased chlorophyll levels enhance light capture, supporting robust growth and stress tolerance.



## CHAMPION

Soil Conditioner

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7

### Improved Nutrient Absorption

Protein hydrolysate activates enzymes, increasing macro and micronutrient bioavailability.

### Color and Vigor Enhancement

Fulvic acid and kelp extract synergistically enhance chlorophyll synthesis, improving photosynthetic efficiency.

### Cell Wall Strengthening

Optimized calcium transport fortifies cell walls, enhancing structural integrity and stress resistance.

### Water Penetration Improvement

Reduces water surface tension, enhancing soil moisture.

### pH Buffering

Stabilizes soil pH, optimizing nutrient availability.

### Foliar Nutrient Absorption

Improves the efficiency of foliar-applied nutrients.

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## SUPER SURFER

Adjuvant

### Enhanced Soil Respiration and Percolation

Peroxidase enzymes improve oxygen diffusion in soil, stimulating aerobic microbial activity and nutrient mineralization.

### Thatch Degradation

Enzymatic breakdown of cellulose and lignin accelerates organic matter decomposition, enhancing soil structure and water infiltration.

### Increased Root Zone Oxygenation

Controlled oxygen release supports mitochondrial respiration, boosting ATP production and root vigor.

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## OxyTurf



## MANNA

Feed. Flourish. Fortify

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### Balanced Nutrition

NPK ratio and trace elements support comprehensive growth and health.

### Soil Structure Improvement

Humic and fulvic acids enhance soil structure and water retention.

### Microbial Diversity

Beneficial bacteria promote nutrient cycling and soil health.

# Abundigro Portfolio Solutions Matrix

This matrix cross-references Abundigro products with key turf management solutions to provide a clear guide for optimising turf health and performance.

<b>SOLUTION:</b>	OxyTurf	Super Surfer	Ukelp	Champion	Manna	Gladiator
Increased Percolation	●	●	●			
Decreasing Thatch	●		●	●		
Disease Suppression	●		●			●
Improved Colour	●			●	●	
Improved Health	●	●	●	●	●	●
Nutrition		●	●	●	●	
Root length	●		●	●	●	
Stress relief	●		●	●	●	●





## INCREASED PERCOLATION

**OxyTurf:** Enhances soil respiration and water movement.

**Super Surfer:** Facilitates water penetration and spread.

**Ukelp:** Promotes root growth and soil health.



## DECREASING THATCH

**OxyTurf:** Breaks down organic matter, reducing thatch build-up.

**Ukelp:** Stimulates microbial activity for thatch decomposition.

**Champion:** Provides nutrients that support healthy turf growth



## DISEASE SUPPRESSION

**OxyTurf:** Boosts aerobic microbial biomass and soil health.

**Ukelp:** Enhances plant immune response and stress tolerance.

**Gladiator:** Strengthens cell walls, making plants more resistant to diseases.



## IMPROVED COLOUR

**OxyTurf:** Promotes overall turf health and colour.

**Champion:** Enriches turf colour through protein hydrolysate and fulvic acid.

**Manna:** Provides balanced nutrition for vibrant turf colour.



## IMPROVED HEALTH

**OxyTurf:** Enhances soil and plant respiration.

**Ukelp:** Supports root growth and stress tolerance.

**Champion:** Improves plant vigor and health.

**Manna:** Provides comprehensive nutrients for turf health.

**Super Surfer:** Optimizes water and nutrient spread.

**Gladiator:** Improves structural integrity and resistance.



## NUTRITION

**Ukelp:** Supplies essential nutrients and growth stimulants.

**Champion:** Provides a balanced nutrient profile for turf health.

**Manna:** Offers a complete NPK ratio and beneficial bacteria.

**Super Surfer:** Enhances nutrient absorption and distribution.



## ROOT VOLUME & LENGTH

**OxyTurf:** Enhances aerobic microbial activity and particle dissemination, creating pathways for root growth.

**Ukelp:** Promotes root development through phytohormone activation and stress mitigation.

**Champion:** Improves chelated nutrient uptake and stimulates roots with amino acids and polysaccharides.

**Manna:** Supplies balanced nutrients, supporting extensive root system expansion.



## STRESS RELIEF

**OxyTurf:** Optimizes oxygen release and microbial activity.

**Ukelp:** Enhances stress tolerance through hormone regulation and robust root development.

**Champion:** Supports enzymatic activities and nutrient absorption,

**Manna:** Manna's balanced NPK ratio and essential micronutrients enhance overall plant vitality, aiding stress resilience

**Gladiator:** Mono-silicic acid fortifies cell walls, significantly improving turf resilience against abiotic and biotic stressors.



# 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.

**COLOUR & APPEARANCE:**  
Green liquid. Suspension concentrate.

## BENEFITS OF UKELP APPLICATION

- 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.

## APPLICATION RATE & INSTRUCTIONS

3 - 10ℓ per Ha

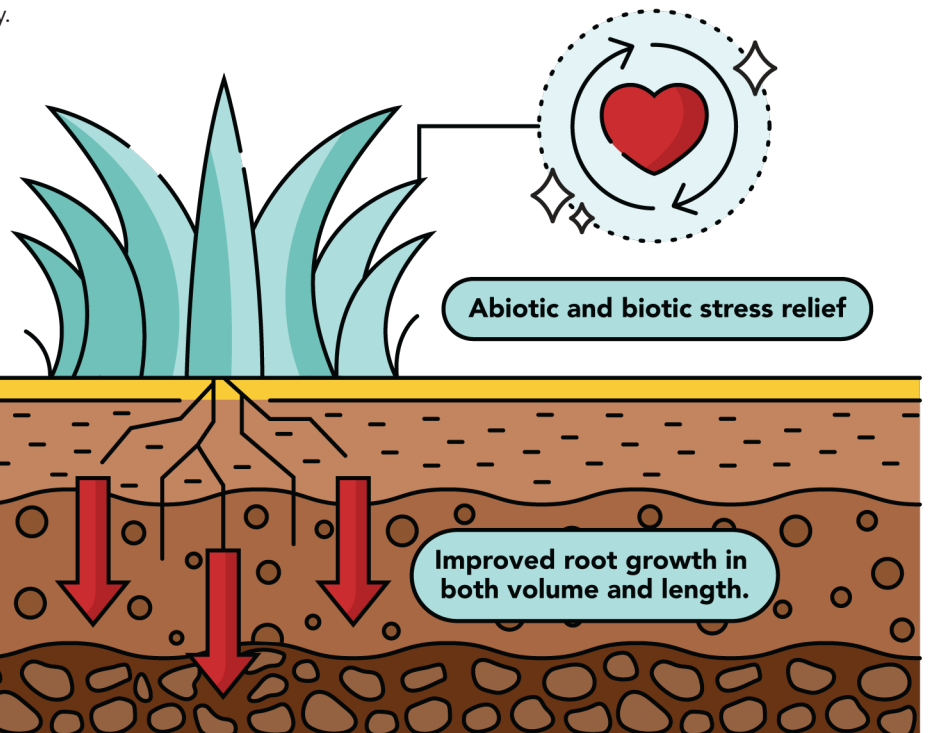
Apply 3 to 10ℓ per Ha depending on turf grass requirements. Apply as foliar spray or soil drench every 2 - 4 weeks.

## COMPATIBILITY

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



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





# GLADIATOR

Mono-silicic acid with  
boron and calcium

## WHAT IS GLADIATOR?

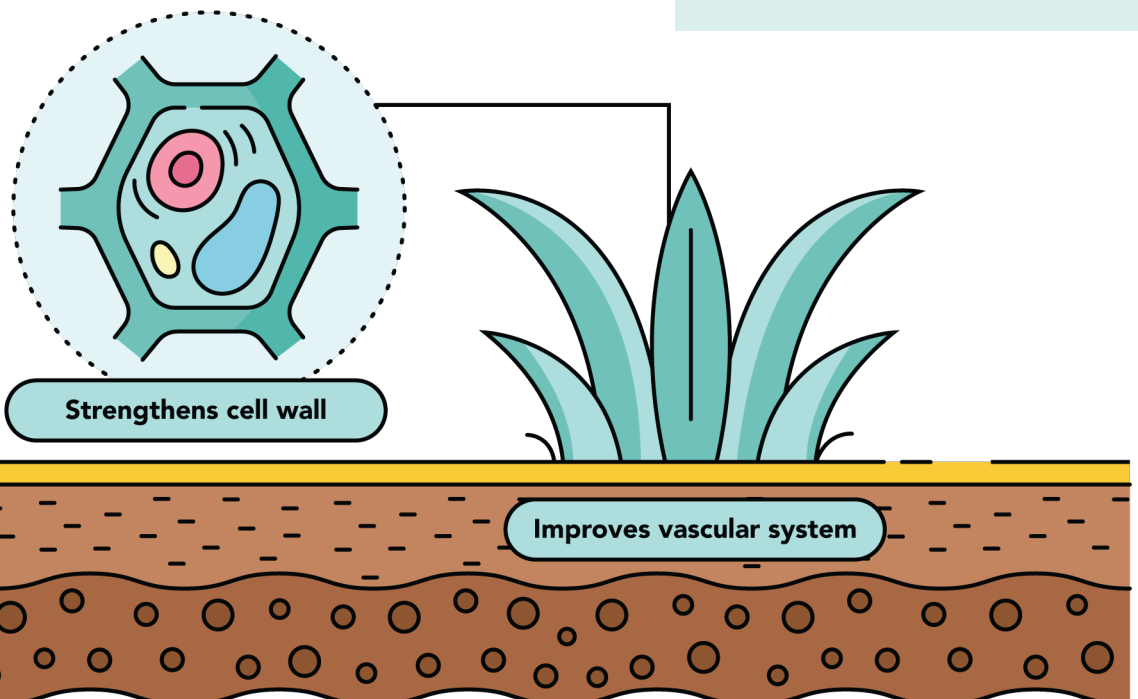
Gladiator offers unmatched support for structural turf health, optimising nutrient absorption and resilience against environmental stressors in sports turf. Featuring a unique blend of monosilicic acid, Boron, and Calcium, Gladiator is crucial for healthy sports turf development.

## BENEFITS OF GLADIATOR APPLICATION

- **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.



# 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 OF CHAMPION APPLICATION

Champion boosts turf grass performance, improves turf quality, and enhances soil health. It fosters a reduction in synthetic fertiliser use, supporting eco-friendly and sustainable turf management.

## MODE OF ACTION

**Nutrient Absorption:** Enhances nutrient uptake, supporting vital growth and development.

**Stress Defence:** Boosts resilience to abiotic and biotic stresses, securing turf health.

**Photosynthesis Boost:** Amplifies photosynthetic efficiency for vibrant turf colour and vigour.

**Soil Vitality:** Promotes beneficial soil microbes, enriching the root environment for healthier turf.

### COLOUR & APPEARANCE:

Golden brown.

## APPLICATION RATE & INSTRUCTIONS

10l per Ha

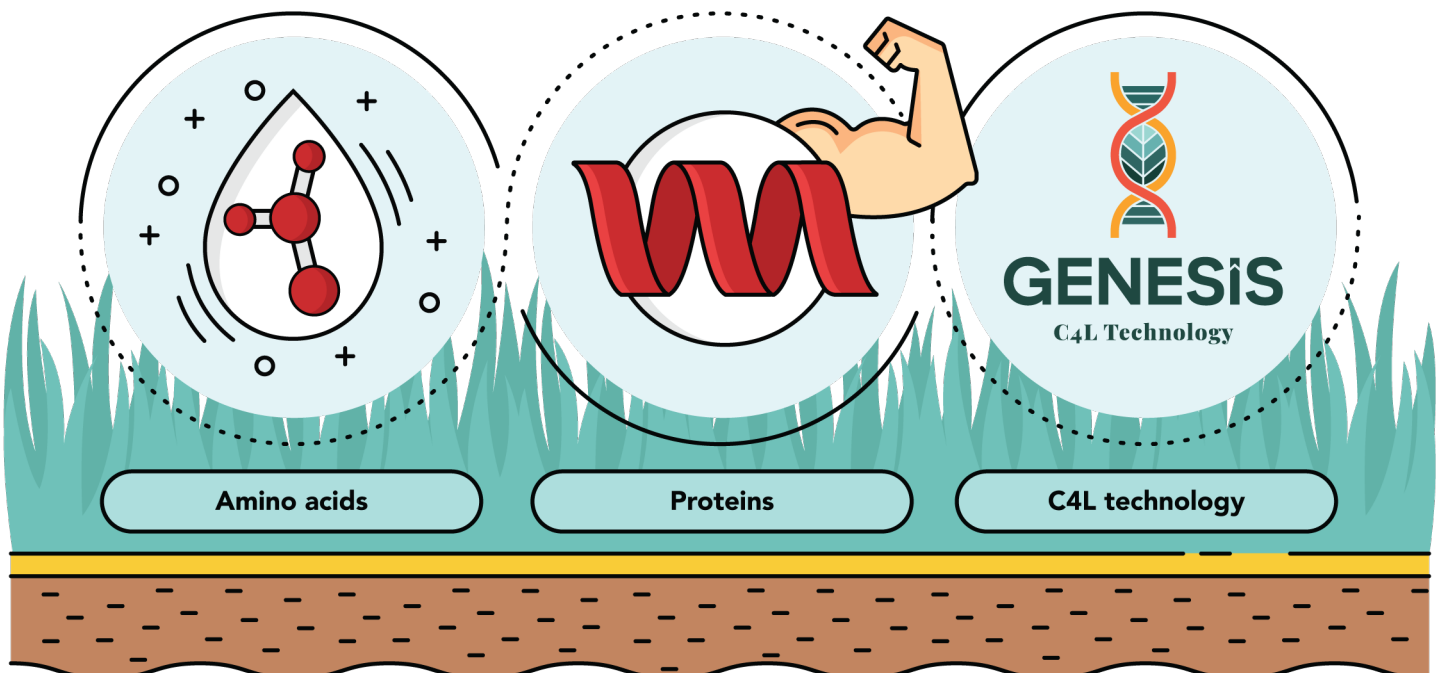
Dilute and apply 10l per Ha monthly, suitable for both foliar application and soil incorporation to meet the specific needs of various grass types.

## 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.







# SUPER SURFER

Adjuvant

## WHAT IS SUPER SURFER?

Super Surfer 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 OF SUPER SURFER APPLICATION

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:

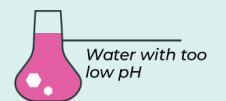
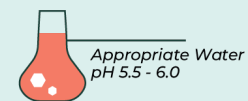
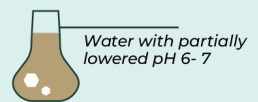
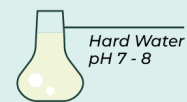
Dark red liquid.

## APPLICATION RATE & INSTRUCTIONS

80-120ml per 100ℓ of water

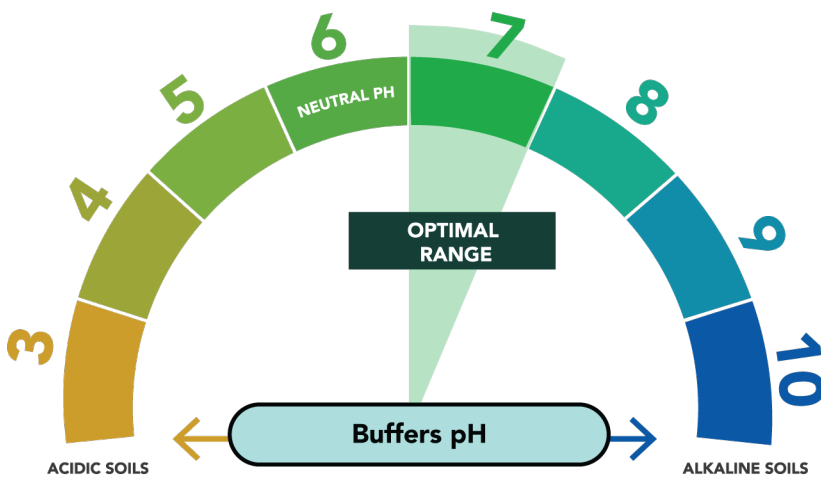
For optimal results, use an average of 80-120ml of Super Surfer per 100ℓ of water.

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.

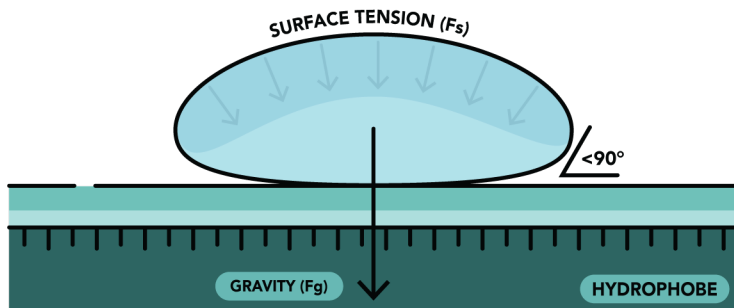


## COMPATIBILITY

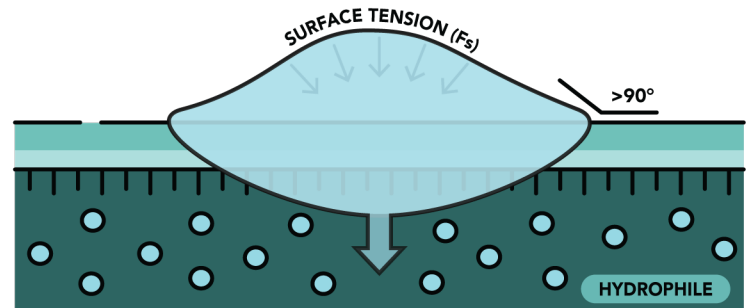
Super Surfer can be also used with all foliar fertilisers and pesticides, and organic bio-stimulants.



Poor wetting properties



Good wetting properties





# 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 OF OXYTURF APPLICATION

- **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

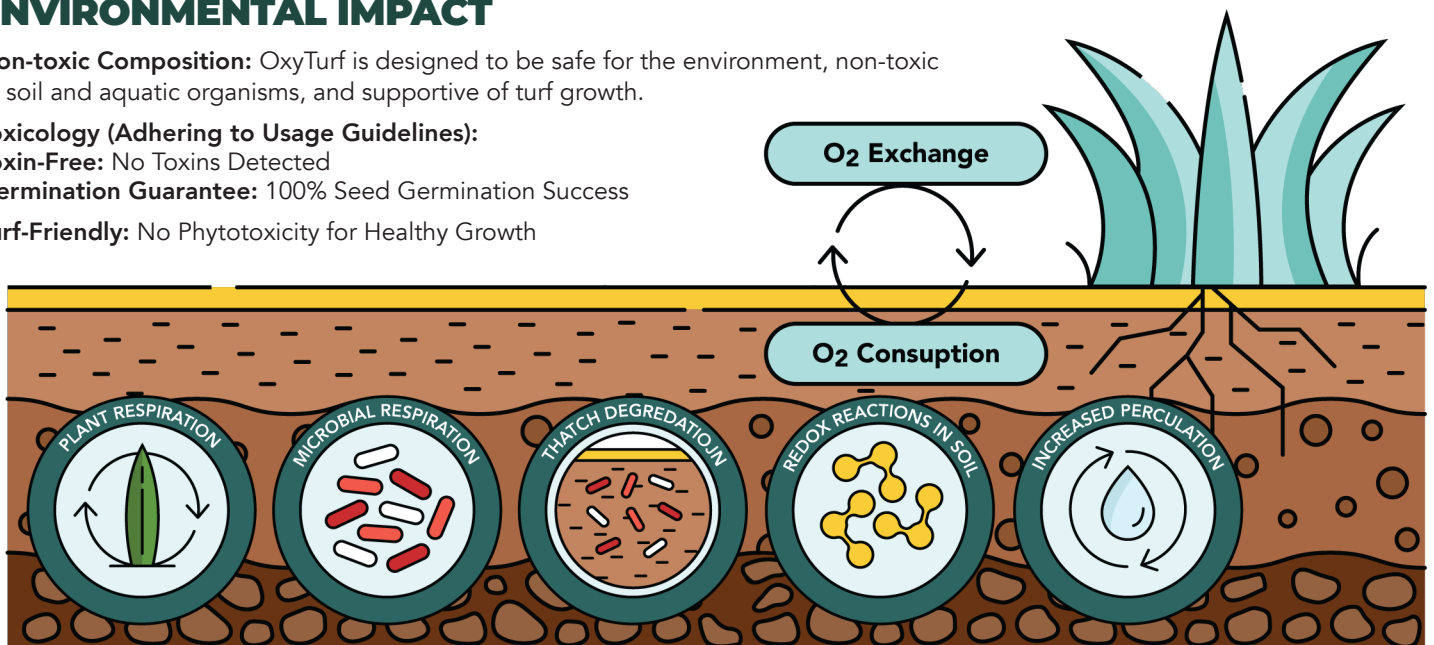
10 - 20ℓ per Ha

**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.





# MANNA

Nature's Advanced  
Liquid Fertilizer 10:5:7

## WHAT IS MANNA 10:5:7?

Manna 10:5:7 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 OF MANNA APPLICATION

- 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 10:5:7 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:

<b>N (Total Nutriegen - DUMAS)</b>	9,7%	<b>Na (Sodium)</b>	477,1 mg/kg	<b>Zn (Zinc)</b>	3%
<b>Fulvic Acid</b>	6,3%	<b>S (Sulphur)</b>	0,15%	<b>B (Boron)</b>	3,4%
<b>Humate</b>	13,3%	<b>P (Phosphorus)</b>	4,6%	<b>Mo (Molybdenum)</b>	7,31%
<b>Ca (Calcium)</b>	3%	<b>Fe (Iron)</b>	9,7%	<b>pH</b>	7.5
<b>Mg (Magnesium)</b>	3,4%	<b>Mn (Manganese)</b>	6,3%	<b>Calculated Carbon</b>	25,39%
<b>K (Potassium)</b>	7,31%	<b>Cu (Copper)</b>	13,3%	<b>Ash</b>	56,34%

**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.

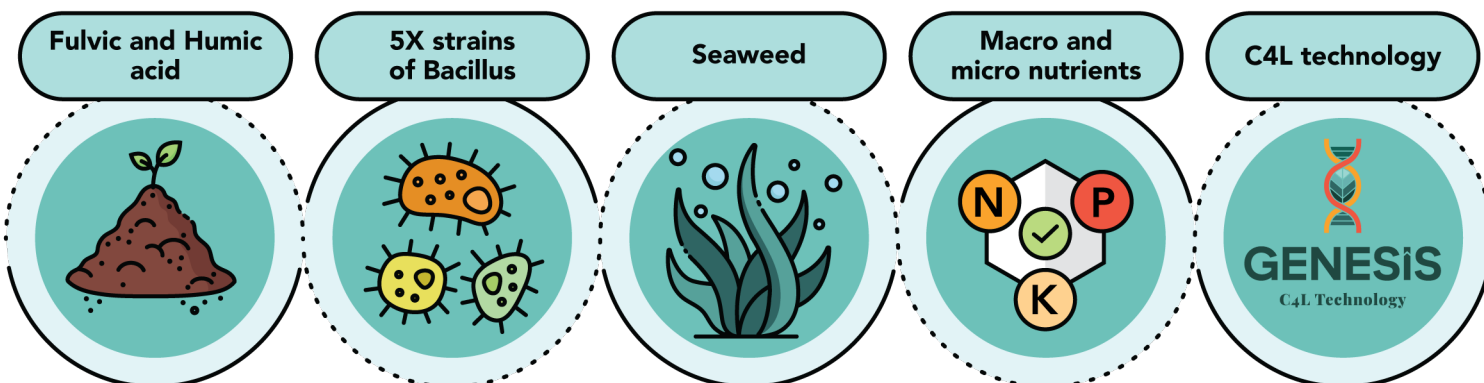
**Frequency:** Bi-weekly, monthly, or as needed based on turf requirements and environmental conditions.

## COMPATIBILITY

Manna 10:5:7 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.





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