

FLORATINE.COM



*Rooted in Science*™  
2024 PRODUCT CATALOG | ASIA PACIFIC





## Rooted in Science™ WHEN QUALITY MATTERS.

Floratine Foliars™ use the following base technologies to ensure your plants get the nutrients when they need them most.



### ORGANIC ACIDS

Nature's most biologically active form of carbon for superior nutrient uptake and translocation.



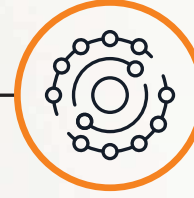
### AMINO ACIDS

The basis for protein production and vital for natural plant defense.



### GLYCOMICS

Mother Nature's invention for moving nutrients around and within plants. Floratine Foliars couple nutrients with glycomics to aid in foliar absorption.



### ANTIOXIDANTS

Help turf counteract stress to protect it.



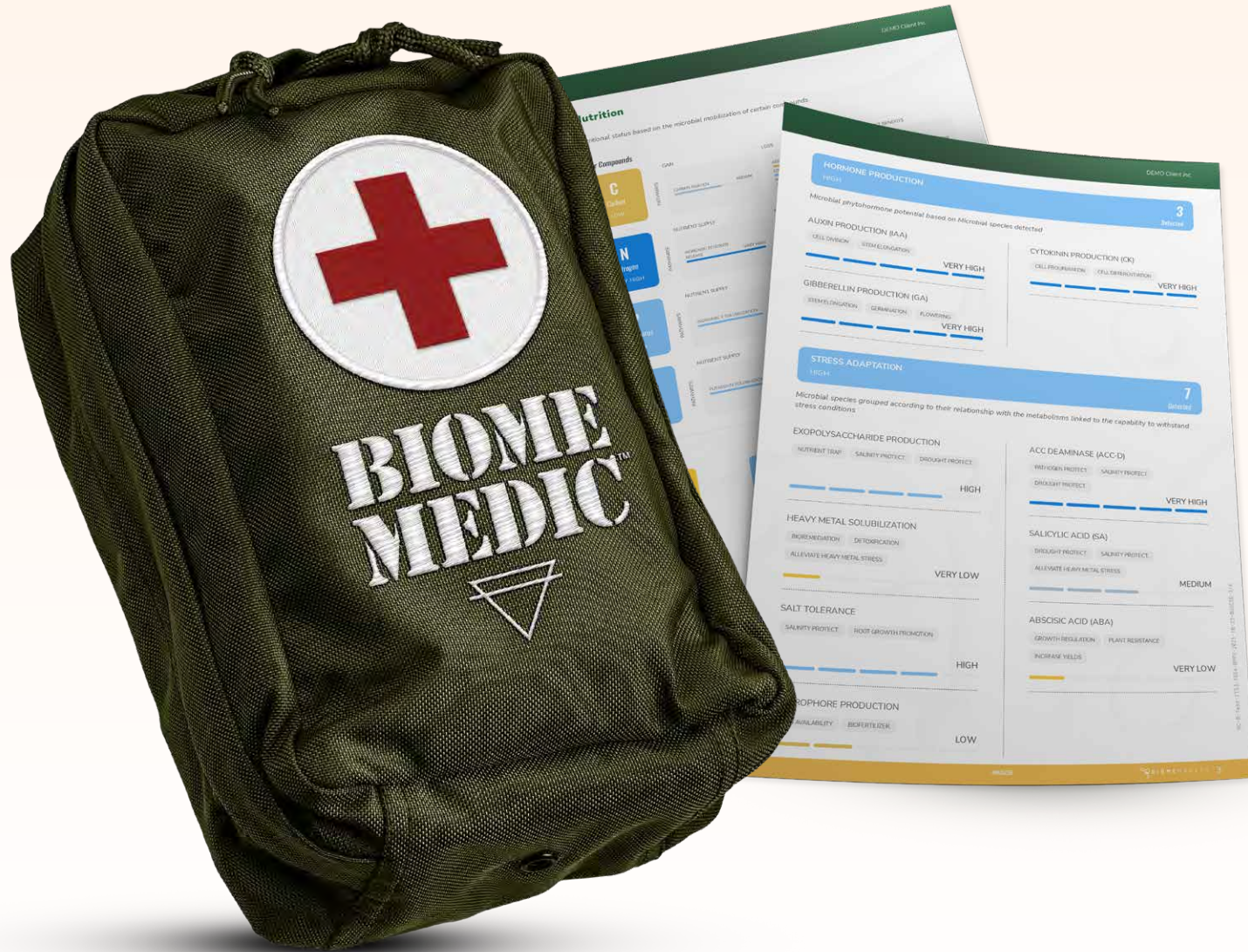
### VITAMIN-HORMONES

Natural, plant-derived bio-molecules that help restore the natural growth habit of intensively managed turf.

## OUR PROMISE

We understand that your **professional reputation and livelihood** are largely dependent upon the quality of the turfgrass you manage. With that in mind, Floratine promises to deliver the purest, most technologically advanced foliar and soil-based solutions with expert agronomic support to help you maintain superior turfgrass quality in formidable conditions.

# THE MOST ADVANCED BIOLOGICAL SOIL TEST



## DISCOVER YOUR SOIL'S UNTAPPED POTENTIAL

Biome Medic is a soil microbiome DNA analysis that provides a user-friendly report on soil nutrition cycling, turf disease risks and biodiversity as a direct result of professional turf management practices.



## ANALYTICS TOOLS & TESTING

### NEW PRODUCTS SPECIFICALLY FORMULATED TO IMPROVE SOIL BIOLOGY

#### BIO M.R.E.

BIO M.R.E. is a solution of photosynthetic and energy producing bacteria coupled with a meal ready to eat blend of sugars to energize and activate the soil and plant. BIO M.R.E. is a power packed food source designed to work synergistically with all of our microbial products.



#### GUARANTEED ANALYSIS (Active Ingredients)

Azotobacter vinelandi*	400,000 CFU/ml
Lactobacillus acidophilus*	400,000 CFU/ml
Glucose*	10.0%
Sucrose*	10.0%
Fructose*	8.0%
Maltose*	4.0%

\*400,000 CFU/ml after activation

PACKAGING	RATE	WEIGHT
12 x 32 oz bottles	32 fl oz/A	2.12 lb / 32 fl oz

Note: apply prior to Spring when soil temps are around 50°F and warming up. Maintain 16 fl oz per acre monthly until soil temps are below 50°F. Shake well before use. Mix with water prior to adding additional products.

#### OPERATORS

OPERATORS is a biological fungicide for strengthening the root zone to control plant pathogens and manage the spread of soil borne diseases. These special forces will build up, and the soil biology will be able to fight off pathogens thereby reducing the need for harsh synthetic chemicals.



#### GUARANTEED ANALYSIS (Active Ingredients)

Azotobacter vinelandi*	400,000 CFU/ml
Clostridium pasteurianum*	400,000 CFU/ml
Lactobacillus acidophilus*	400,000 CFU/ml
Bacillus subtilis	350,000 CFU/ml

\*400,000 CFU/ml after activation

PACKAGING	RATE	WEIGHT
12 x 32 oz bottles	32 fl oz/A	2.12 lb / 32 fl oz

Note: apply prior to Spring when soil temps are around 50°F and warming up. Maintain 16 fl oz per acre monthly until soil temps are below 50°F. Shake well before use. Mix with water prior to adding additional products.

#### PATHFINDERS

PATHFINDERS is a highly concentrated army of free-living soil microbes. When deployed, PATHFINDERS go to work to regenerate soils by opening the nutrient pathways for capturing, converting, and solubilizing key nutrients for plant uptake.



#### GUARANTEED ANALYSIS (Active Ingredients)

Azotobacter vinelandi*	400,000 CFU/ml
Clostridium pasteurianum*	400,000 CFU/ml
Lactobacillus acidophilus*	400,000 CFU/ml

\*400,000 CFU/ml after activation

PACKAGING	RATE	WEIGHT
12 x 32 oz bottles	32 fl oz/A	2.12 lb / 32 fl oz

Note: apply prior to Spring when soil temps are around 50°F and warming up. Maintain 16 fl oz per acre monthly until soil temps are below 50°F. Shake well before use. Mix 16 fl oz of PATHFINDERS with 50-60 gal of water to activate.



# SOIL MECHANIX

FPG PHYSICAL PROPERTIES LABS



**RAPID. RELIABLE. AFFORDABLE.**

**INCLUDED IN ANALYSIS:**

**PARTICLE DENSITY**

Particle Density is the volumetric mass of the solid soil. It differs from bulk density because the volume used does not include pore spaces. Particle density depends on the chemical composition and crystal structure of solid mineral particles and is not affected by pore space.

**TOTAL CORE WATER HOLDING %**

This is a measure of the water holding capacity of your soil sample. It is a very important agronomic characteristic of soil. Lower water holding capacities reach saturation sooner than soils with higher water holding capacities and are subject to leaching losses of nutrients and pesticides.

**UNIFORM WETTING %**

This is a measure of a mass of water that is retained in a mass of disturbed, oven-dried soil. For example, if water holding is 62%, this means the weight of the dry soil increased by 62% and released the rest of the testing water quantity used. The purpose of this test is to indicate if any 1" sections of the sample are the same, or higher, or lower in comparison with each other in order to see how uniform the soil is wetting.

**THE CORE SOLUTION FOR SOIL PROBLEMS**

Soil Mechanix is an in-depth test of soil core samples to determine soil respiration, acidity, particle distribution, water holding, and gravimetric moisture content.





# Ana-Lync



## THE BEST DIAGNOSIS FOR THE MOST ACCURATE PRESCRIPTION

## ANALYTICS TOOLS & TESTING

### ESTABLISH THE PROPER NUTRIENT REGIMEN.

Ana-Lync Golf™ Soil Test is an advanced soil testing system that offers in-depth analysis integral to helping superintendents establish the proper nutrient regimen. What makes it unique is that it matches your soil samples against 30,000 other samples across your specific region. Using this data, Ana-Lync helps superintendents understand which nutrients the turf plant needs and which ones could limit or prevent the optimal production of proteins through photosynthesis.

With this precise soil diagnosis, Floratine can then help you develop programs that correct nutrient deficiencies through a combination of highly efficient foliar-feeding and soil applications.



A close-up photograph of a vibrant green leaf, likely from a plant like a succulent or a similar species, covered in numerous clear water droplets. The droplets are of various sizes and are scattered across the leaf's surface, reflecting light and creating a fresh, dewy appearance. The leaf's veins are clearly visible, and the overall color is a rich, healthy green. The background is softly blurred, emphasizing the texture and detail of the leaf and its droplets.

# FOLIAR

## PRODUCTS

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Take a direct approach for healthier turf. Floratine Foliars™ allow you to bypass the root system and deliver nutrients directly through the leaves, ensuring your turf receives the nutrition it needs to thrive in even the most stressful conditions.

### FLORATINE FOLIARS™

#### **DO NOT CONTAIN**

Non-beneficial, agricultural or utility-grade nutrients (Chlorides, Hydroxides, Acetates) or synthetic chelates (EDTA, HEDTA, etc). If a nutrition product contains any of the ingredients above, foliar uptake may be significantly inhibited and may cause stress to your turf and less than desirable results.

### READ YOUR LABELS

EDTA's "taste" bad to the plant. Floratine uses glycomics so the plant will absorb nutrients faster and provide an energy source to help the plant during times of stress.

EDTA's are a cheap way of keeping nutrients from binding together so you can put more nutrients into a jug; but they limit the plant's utilization of those nutrients when applied foliarly.

**Patented Floratine Foliars™ fortified with Ascophyllum nodosum**

Floratine is an innovator in developing Floratine Foliars for turfgrass. Floratine combines nutrients with its patented blend of naturally occurring plant extracts, antioxidants, amino acids and carbohydrates to condition turfgrasses to tolerate environmental stresses through improved grass growth and root development.

**ASTRON®  
(ROOT DRIVER)**

Floratine's core technology for driving roots and preconditioning turfgrasses to stress.



**BENEFITS INCLUDE:**

- Enhanced Root Systems
- Increased Cell Division
- Stress Tolerance
- Plant Recovery
- Synergistic With Primo®

**NUTRIENT ANALYSIS**

Calcium (Ca).....	2.00%
Magnesium (Mg) .....	0.50%
Boron (B) .....	0.06%
Copper (Cu) .....	0.15%
Iron (Fe).....	1.30%
Zinc (Zn) .....	0.335%

**DERIVED FROM**

Calcium gluconate, magnesium sulfate, boric acid, copper sulfate, ferrous sulfate and zinc sulfate.

PACKAGING	RATE	WEIGHT
2 x 10 L jugs	5 - 10 L/ha	1.21 kg/L

**PER "4" MAX  
(DRIVE DENSITY)**

Floratine's core technology for driving topical growth and density or to promote recovery of damaged turf. Combines primary and secondary nutrients with naturally occurring and biologically active fermentation materials, antioxidants and carbon compounds.



**NUTRIENT ANALYSIS**

Total Nitrogen (N) .....	13.00%
13.00% Urea Nitrogen	
Magnesium (Mg) .....	0.50%
Sulfur (S) .....	2.20%
Iron (Fe).....	2.00%
Manganese (Mn) .....	1.00%

**DERIVED FROM**

Urea, magnesium sulfate, ferrous sulfate and manganese sulfate.

PACKAGING	RATE	WEIGHT
2 x 10 L jugs	5 - 10 L/ha	1.24 kg/L

**PERK UP  
(HEAT STRESS RELIEF)**

No turf should be without it during the summer! Provides rapid relief from photosynthetic and respiration stresses caused by high humidity and heat, low light and/or saturated soil conditions. An advanced formulation of readily available calcium and carbohydrates complexed with a proprietary blend of patented phytochemicals, antioxidants and amino acid chelates.

**NUTRIENT ANALYSIS**

Calcium (Ca).....8.00%

**DERIVED FROM**

Calcium glucoheptonate.

**PACKAGING**

2 x 10 L jugs, 113 L drum,  
208 L drum, 1000 L tote

**RATE**

5 - 10 L/ha

**WEIGHT**

1.42 kg/L



**KNIFE® PLUS  
(RAPID GREEN)**

The advanced formulation for improved color and growth, extended greening, increased uniformity, quick availability and improved rooting for fine turf. Encourages healthy plant development under normal and extreme environmental, chemical and mechanical stresses. Superintendent designed; superintendent proven.



**NUTRIENT ANALYSIS**

Total Nitrogen (N) .....	12.00%
12.00% Urea Nitrogen	
Sulfur (S) .....	4.20%
Copper (Cu) .....	0.12%
Iron (Fe).....	6.00%
Manganese (Mn) .....	1.50%
Molybdenum (Mo) .....	0.03%
Zinc (Zn) .....	1.00%

**DERIVED FROM**

Urea, copper sulfate, ferrous sulfate heptahydrate, manganese sulfate, sodium molybdate and zinc sulfate.

PACKAGING	RATE	WEIGHT
2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	5 - 10 L/ha	1.38 kg/L

## RENAISSANCE (MICRONUTRIENT TECHNOLOGY)

A multivitamin for turf. Provides micronutrients fortified with Floratine's balanced blend of kelp and other natural fermentation extract materials for rapid foliar uptake. Effective for preventing nutrient deficiencies or for stress recovery situations.

### NUTRIENT ANALYSIS

Magnesium (Mg).....	0.50%	<b>DERIVED FROM</b> Magnesium sulfate, ferrous sulfate heptahydrate, manganese sulfate, sodium molybdate dihydrate and zinc sulfate.
Sulfur (S).....	2.00%	
Iron (Fe).....	1.75%	
Manganese (Mn).....	1.00%	
Molybdenum (Mo).....	0.001%	
Zinc (Zn).....	2.00%	

<b>PACKAGING</b>	<b>RATE</b>	<b>WEIGHT</b>
2 x 10 L jugs	2.5 - 5.0 L/ha	1.28 kg/L



## PROTESYN® (LIQUID SUNSHINE™)

ProteSyn is Protein Synthesis! This advanced, liquid organic complex provides complete amino acids, proteins, simple and complex carbohydrates, and essential turf vitamins to conserve plant energy and improve photosynthetic efficiency.

### NUTRIENT ANALYSIS

Total Nitrogen (N).....	6.00%	<b>DERIVED FROM</b> Urea, ammonium phosphate and potassium thiosulfate.
1.00% Ammoniacal Nitrogen		
5.00% Urea Nitrogen		
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ).....	2.00%	<b>PACKAGING</b> <b>WEIGHT</b>
Soluble Potash (K <sub>2</sub> O).....	3.00%	
<b>RATE</b>		
FOLIAR: 10 - 20 L/ha		
SOIL: 30 - 40 L/ha		

Also recommended for use in soil applications.



## FLORADOX® PRO (DEFENSIVE AND RECUPERATIVE PROTEINS)

Nothing else compares to Floradox Pro! Promotes turf strength and enhances resistance to stresses by providing supplemental building blocks and energy sources to generate defensive and recuperative proteins. These protein compounds are the key to a plant's ability to withstand stress, heal wounds and recover from injury. Floradox Pro is designed to enhance cellular and tissue strength.

### NUTRIENT ANALYSIS

Total Nitrogen (N).....	2.00%	<b>DERIVED FROM</b> Urea and monopotassium phosphate.
2.00% Urea Nitrogen		
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ).....	2.00%	<b>PACKAGING</b> <b>RATE</b> <b>WEIGHT</b>
Soluble Potash (K <sub>2</sub> O).....	3.00%	

Also recommended for use in soil applications.



## 5.0 CAL (CELLULAR STRENGTH)

5.0 Cal is a foliar-applied blend of calcium with simple and complex carbohydrates that increases cellular strength, provides energy and addresses calcium deficiencies.

### NUTRIENT ANALYSIS

Calcium (Ca).....	5.00%	<b>DERIVED FROM</b> Calcium glucoheptonate.	<b>PACKAGING</b>	<b>RATE</b>	<b>WEIGHT</b>



## GLYCOFUZE™ (CARB LOADER)

GlycoFuze is a next-generation-technology product that provides glycomic sugars during low-light periods and increases carb loading. GlycoFuze should be used where foliar uptake and systemic movement is desired. GlycoFuze's carbohydrate base can assist respiration when external conditions interfere with photosynthesis.

### NUTRIENT ANALYSIS

Total Nitrogen (N).....	2.00%	<b>DERIVED FROM</b> Urea, monopotassium phosphate and boric acid.
2.00% Urea Nitrogen		
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ).....	1.00%	<b>PACKAGING</b> <b>RATE</b> <b>WEIGHT</b>
Soluble Potash (K <sub>2</sub> O).....	2.00%	
Boron (B).....	0.50%	10 - 20 L/ha    1.15 kg/L





# EXPECT **MORE** FROM YOUR FOLIARS

THE X-FACTOR INCLUSION BOLDLY ENHANCES THE POWERPLAY® TECHNOLOGY AND CREATES NEW BIO-NUTRITIONALS WITH:



**THE FASTEST FOLIAR UPTAKE MECHANISM**

Foliar uptake acceleration using a carbon-powered synergist and a built-in spreader/sticker, X-Factor speeds up plant uptake and provides rainfast properties to the entire spray mix.

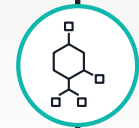


**THE WORLD'S ONLY PLANT-ABSORBED NON-CONTACT UV BLOCKER**

Protects against cellular damage caused by ultraviolet light.



**THE POWER OF SALICYLIC ACID FOR INCREASED RUBISCO AND HEAT SHOCK TOLERANCES**



**NATURE'S GIFT OF TERPENOIDS FOR GREATER PLANT POTENTIAL**



**ABIOTIC STRESS FIGHTERS WITH PHARMACEUTICAL-GRADE ANTIOXIDANTS**



**PRE-BIOSTIMULANT EXCITATION WITH SPECIFIC AMINO ACIDS**



# X-FACTOR

X-Factor is the latest Floratine derived complex of plant health synergists built into the bio-nutritional line of advanced foliars.

## FOR X-TRAORDINARY TURF

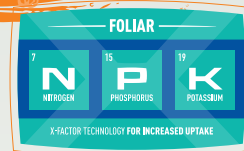


THE COMPLETE X-FACTOR LINE UP OF BIO-NUTRITIONALS

<b>X</b> 0-0-22	<b>X</b> 4-4-16	<b>X</b> 7-7-7	<b>X</b> 12-0-12 (SRN)	<b>X</b> 12-6-0
<b>X</b> 18-3-6	<b>X</b> 23-0-0 + Mo	<b>X</b> 24-0-0 + Mo	<b>X</b> 25-0-0 (SRN)	<b>X</b> 28-0-0

**LIQUID NUTRIENTS WITH ORGANIC ACID TECHNOLOGY**

Contains proprietary X-Factor foliar technology for maximum nutrient utilization.



**X-FACTOR FOLIAR PRODUCTS**

PRODUCT	NUTRIENT ANALYSIS	DERIVED FROM	PACKAGING	WEIGHT	RATE
<b>X 0-0-22</b>	22.00% Soluble Potash (K <sub>2</sub> O) 4.20% Sulfur (S)	Potassium thiosulfate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.387 kg/L	10 - 20 L/ha
<b>X 4-4-16</b>	4.00% Total Nitrogen (N) 1.15% Ammoniacal Nitrogen 2.85% Urea Nitrogen 4.00% Available Phosphate (P <sub>2</sub> O <sub>5</sub> ) 16.00% Soluble Potash (K <sub>2</sub> O) 4.00% Sulfur (S)	Urea, ammonium phosphate, and potassium thiosulfate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.333 kg/L	10 - 20 L/ha
<b>X 7-7-7</b>	7.00% Total Nitrogen (N) 2.75% Ammoniacal Nitrogen 0.75% Nitrate Nitrogen 3.50% Urea Nitrogen 7.00% Available Phosphate (P <sub>2</sub> O <sub>5</sub> ) 7.00% Soluble Potash (K <sub>2</sub> O) 2.00% Sulfur (S)	Ammonium phosphate, urea ammonium nitrate, and potassium thiosulfate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.253 kg/L	10 - 20 L/ha
<b>X 12-0-12 (SRN)</b>	12.00% Total Nitrogen (N) 8.00% Urea Nitrogen 4.00% Slow Release Nitrogen 12.00% Soluble Potash (K <sub>2</sub> O)	Urea, methylene urea, and potassium thiosulfate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.279 kg/L	10 - 20 L/ha
<b>X 12-6-0</b>	12.00% Total Nitrogen (N) 3.29% Ammoniacal Nitrogen 2.90% Nitrate Nitrogen 5.81% Urea Nitrogen 6.00% Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	Urea, ammonium phosphate, and urea ammonium nitrate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.146 kg/L	10 - 20 L/ha
<b>X 18-3-6</b>	18.00% Total Nitrogen (N) 4.90% Ammoniacal Nitrogen 3.90% Nitrate Nitrogen 9.20% Urea Nitrogen 3.00% Available Phosphate (P <sub>2</sub> O <sub>5</sub> ) 6.00% Soluble Potash (K <sub>2</sub> O) 4.00% Sulfur (S)	Ammonium phosphate, urea ammonium nitrate, and potassium thiosulfate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.318 kg/L	10 - 20 L/ha
<b>X 23-0-0 + Mo</b>	23.00% Total Nitrogen (N) 3.50% Ammoniacal Nitrogen 3.50% Nitrate Nitrogen 16.00% Urea Nitrogen 0.03% Molybdenum (Mo)	Urea ammonium nitrate and sodium molybdate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.178 kg/L	10 - 20 L/ha
<b>X 24-0-0 + Mo</b>	24.00% Total Nitrogen (N) 3.50% Ammoniacal Nitrogen 3.50% Nitrate Nitrogen 17.00% Urea Nitrogen 0.03% Molybdenum (Mo)	Urea ammonium nitrate and sodium molybdate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.178 kg/L	10 - 20 L/ha
<b>X 25-0-0 (SRN)</b>	25.00% Total Nitrogen (N) 18.00% Slow Release Nitrogen 7.00% Methylene Urea	Methylene urea and urea	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.223 kg/L	10 - 20 L/ha
<b>X 28-0-0</b>	28.00% Total Nitrogen (N) 4.10% Ammoniacal Nitrogen 4.10% Nitrate Nitrogen 19.80% Urea Nitrogen	Urea ammonium nitrate	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.273 kg/L	10 - 20 L/ha

**FOLIAR PRODUCTS**



PRODUCT	NUTRIENT ANALYSIS	PACKAGING	WEIGHT	RATE	
<b>C<sub>4</sub> GROWTH</b>	<b>HIGH FIVE</b> Use High Five to maximize growth for warm-season grasses. Great for use in grow-ins, aerification, damage recovery and transitions back to base C <sub>4</sub> grasses. Not for use on cool-season grasses.	2.00% Sulfur (S) 3.00% Iron (Fe) 2.00% Manganese (Mn) 0.50% Zinc (Zn) <b>DERIVED FROM</b> ferrous sulfate heptahydrate, manganese sulfate and zinc sulfate monohydrate.	2 x 10 L jugs	1.18 kg/L	5 - 10 L/ha
<b>FAIRWAY COLOR</b>	<b>LARGO®</b> Premium-quality nutrient supplement for golf course tees, fairways and roughs. Combines essential major and micronutrients with a patented blend of naturally occurring plant extracts for enhanced stress tolerance, root growth, turf quality and color.	12.00% Total Nitrogen (N) 12.00% Urea Nitrogen 4.20% Sulfur (S) 6.00% Iron (Fe) 1.50% Manganese (Mn) 1.00% Zinc (Zn) <b>DERIVED FROM</b> urea, ferrous sulfate heptahydrate, manganese sulfate and zinc sulfate.	2 x 10 L jugs 113 L drum 208 L drum 1000 L tote	1.38 kg/L	5 - 10 L/ha
<b>PASPALUM NUTRITION</b>	<b>PAS-PORT</b> Pas-Port is a concentrated liquid nutrient designed specifically for all paspalum grasses. It contains key amounts of calcium and magnesium for color and strength along with sodium and chloride for improved photosynthesis and transpiration.	6.00% Calcium (Ca) 1.00% Magnesium (Mg) 10.00% Chlorine (Cl) 0.20% Sodium (Na) <b>DERIVED FROM</b> calcium chloride, magnesium chloride and sodium chloride.	2 x 10 L jugs	1.24 kg/L	10 - 20 L/ha
	<b>CALSPRA-Mg</b> Nitrate only sources of calcium and magnesium for a balanced maintenance foliar feed for meeting identified deficiencies.	5.00% Nitrogen (N) 5.00% Nitrate Nitrogen 6.00% Calcium (Ca) 0.45% Magnesium (Mg) <b>DERIVED FROM</b> calcium nitrate and magnesium nitrate.	2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.24 kg/L	20 - 30 L/ha
	<b>UVEX 186</b> UVEX 186 is foliarly applied and absorbed offering UVA and UVB protection to the internal plant cells while also delivering a powerful antioxidant package with each application.	1.5% Total Nitrogen (N) 1.5% from amino acids <b>DERIVED FROM</b> wheat and soy amino acids.	2 x 10 L jugs, 113 L drum	1.04 kg/L	16 L/ha

FOLIAR PRODUCTS (CONTINUED)

PRODUCT	NUTRIENT ANALYSIS	PACKAGING	WEIGHT	RATE
<p><b>PK FIGHT® 0-0-28</b> A proprietary phosphite fertilizer that boosts the energy-generating Krebs cycle of the turf. Is readily absorbed in turf foliage, but may also be applied as a soil application for root uptake. A must for any turf feeding program!</p>	<p>22.00% Available Phosphate (P2O5) 28.00% Soluble Potash (K2O) <b>DERIVED FROM</b> potassium phosphite.</p>	<p>2 x 10 L jugs 113 L drum 208 L drum 1000 L tote</p>	<p>1.60 kg/L</p>	<p>Fairways 5 - 10 L/ha  Greens 10 - 20 L/ha</p>
<p><b>PHLEX-MAG</b> 4% liquid magnesium supplement specifically formulated for maximum availability. Citric acid chelation ensures rapid absorption for foliar uptake and also prevents soil tie-ups for root uptake.  Also recommended for use in soil applications.</p>	<p>4.00% Magnesium (Mg) <b>DERIVED FROM</b> magnesium sulfate sequestered with citric acid.</p>	<p>2 x 10 L jugs 113 L drum 208 L drum 1000 L tote</p>	<p>1.22 kg/L</p>	<p>2.5 - 5.0 L/ha</p>
<p><b>PHLEX-MAN</b> 5% liquid manganese supplement with citric acid chelation for rapid absorption, maximum availability and prevention of soil tie-ups.  Also recommended for use in soil applications.</p>	<p>5.00% Manganese (Mn) <b>DERIVED FROM</b> manganese sulfate chelated with citric acid.</p>	<p>2 x 10 L jugs 113 L drum 208 L drum 1000 L tote</p>	<p>1.16 kg/L</p>	<p>2.5 - 5.0 L/ha</p>
<p><b>P-48</b> The premium phosphate soluble nutrient formulation that is essential for increasing PO<sub>4</sub> for rooting and energy.  Also recommended for use in soil applications.</p>	<p>10.00% Total Nitrogen (N) 7.80% Ammoniacal Nitrogen 0.90% Nitrate Nitrogen 1.30% Urea Nitrogen 48.00% Available Phosphate (P<sub>2</sub>O<sub>5</sub>) 8.00% Soluble Potash (K<sub>2</sub>O) <b>DERIVED FROM</b> urea, ammonium phosphate and potassium nitrate.</p>	<p>11.3 kg pail</p>		<p>6 - 12 kg/ha</p>
<p><b>IRON MAID</b> 6% chelated iron compound designed for rapid green-up of fairways, tees and roughs.</p>	<p>15.00% Total Nitrogen (N) 15.00% Urea Nitrogen 1.20% Sulfur (S) 6.00% Iron (Fe) <b>DERIVED FROM</b> urea and ferrous sulfate heptahydrate.</p>	<p>113 L drum 208 L drum 1000 L tote</p>	<p>1.31 kg/L</p>	<p>10 - 20 L/ha</p>

NUTRIENT ANALYSIS SUMMARY

PRODUCT	RATE	MAJOR			SECONDARY			MICRO									
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Ca	Mg	S	B	Cl	Cu	Fe	Mn	Mo	Na	Si	Zn	
5.0 Cal	10-20				5.0												
Astron®	5-10				2.0	0.50		0.06		0.15	1.30						0.335
Calspra-Mg	20-30	5.00			6.00	0.45											
Floradox® Pro	10-20	2.0	2.0	3.0													
GlycoFuze™	10-20	2.0	1.0	2.0				0.5									
High Five	5-10						2.0				3.00	2.00					0.50
Iron Maid	10-20	15.0					1.20				6.00						
Knife® Plus	5-10	12.0					4.20			0.12	6.00	1.50	0.03				1.00
Largo®	5-10	12.0					4.20				6.00	1.50					1.00
P-48	6-12 kg/ha	10.0	48.0	8.0													
Pas-Port	10-20				6.0	1.00			10.00							0.20	
Per "4" Max	5-10	13.0				0.50	2.20				2.00	1.00					
Perk Up	5-10				8.00												
Phlex-Mag	2.5-5					4.00											
Phlex-Man	2.5-5											5.00					
PK Fight® 0-22-28	10-20		22.0	28.0													
ProteSyn®	10-20	6.0	2.0	3.0													
Renaissance	2.5-5					0.50	2.00				1.75	1.00	0.001				2.00
UVEX 186	16	1.5															
X-Factor 0-0-22	10-20			22.0			4.2										
X-Factor 4-4-16	10-20	4.0	4.0	16.0			4.0										
X-Factor 7-7-7	10-20	7.0	7.0	7.0			2.0										
X-Factor 12-0-12 (SRN)	10-20	12.0		12.0													
X-Factor 12-6-0	10-20	12.0	6.0														
X-Factor 18-3-6	10-20	18.0	3.0	6.0			4.0										
X-Factor 23-0-0 + Mo	10-20	23.0														0.03	
X-Factor 24-0-0 + Mo	10-20	24.0														0.03	
X-Factor 25-0-0 (SRN)	10-20	25.0															
X-Factor 28-0-0	10-20	28.0															



# SOIL PRODUCTS

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Turf can only be as healthy as the soil it's growing in. The Floratine line of soil conditioning products breaks down thatch and black layer, improves soil chemistry and increases available nutrient uptake, helping you thrive and maintain consistently vigorous turf.

## CALPHLEX® (SOIL CATALYST)

Calphlex is an extremely effective, chelated liquid calcium product for treatment of soils that contain undesirable levels of sodium, salts and bicarbonates. The multiple glutaric acid chelation of Calphlex provides product stability, and its cyclic reactivity in the soil promotes conversion of insoluble calcium to a soluble form. It can be applied as an effective substitute or supplement for traditional liming.

### PACKAGING

2 x 10 L jugs, 113 L drum,  
208 L drum, 1000 L tote

### RATE

10 - 20 L/ha  
Flush: Up to 50 L/ha



## MAXIPEX (SOIL CATALYST)

MaxiPlex provides multiple benefits for all soil types. It is a concentrated 20% liquid humic acid which decreases soil nutrient tie-ups and promotes the availability of nutrients otherwise unavailable for plant uptake. MaxiPlex stimulates microbial activity and enhances the soil's capacity for air, nutrient and water availability.

### PACKAGING

2 x 10 L jugs, 113 L drum,  
208 L drum, 1000 L tote

### RATE

10 - 20 L/ha  
Flush: Up to 60 L/ha



## TURGOR® 0-0-5 + 2 Si (TURF STRENGTH)

Turgor applications provide significant benefits to turfgrass, including strengthened cellular structure and tissue, leaf erectness (turgidity) and improved mowing cut, stress resistance and wear tolerance. Turgor contains a readily available blend of potassium and silicon.

### PACKAGING

2 x 10 L jugs, 113 L drum,  
208 L drum, 1000 L tote

### RATE

10 - 20 L/ha

# TURGOR

## FREE 15 (SOLUBILIZE PHOSPHORUS)

Developed in response to restrictions being placed on phosphorus applications, Free 15 is a patented formulation of concentrated carbohydrates fortified with root and microbial exudates that releases phosphorus from the soil. Highly effective during rooting or stress periods, it allows sugars and organic acids to efficiently transport the phosphorus to the roots and throughout the plant, increasing plant energy and strength.

### PACKAGING

4 x 0.78 kg jugs

### RATE

7.8 kg/ha



## SPIKE (FAIRWAY COLOR)

Spike is for golfers who love green grass for the looks, but more importantly for turf managers who know green means the power of chlorophyll. Packed with micronutrients and our new Fe+2 technology, designed to stabilize iron in its only plant-usable form, Spike is the perfect choice for extended greening on larger areas at an affordable price point.

### PACKAGING

2 x 10 L jugs, 113 L drum,  
208 L drum, 1000 L tote

### RATE

10 - 20 L/ha



## EON 75 (BIOLOGICAL AERIFICATION)

Eon 75 is an organic, long-term soil conditioner containing 75% purified humic acids. Provides multiple benefits to improve soil and the soil environment, helping to ensure that every foliar application can reach its maximum potential. Aerating biologically, it regulates water movement in the soil and flocculates soil particles while stimulating microbial proliferation.

# EON 75

### PACKAGING

GREENS GRADE (SGN 80-110)  
10 kg pail, 40 x 22.7 kg bags (1 pallet minimum),  
455 kg sack, 910 kg sack

FAIRWAY GRADE (SGN 100-300)  
10 kg pail, 40 x 22.7 kg bags (1 pallet minimum),  
455 kg sack, 910 kg sack

### RATE

50 kg/ha

## SOIL PRODUCTS

## OXYFLOR (OXYGEN INFUSION)

A proprietary stabilized oxygen compound designed to increase available oxygen in the root zone. Oxyflor is intended for use in any situation where a temporary increase in soil oxygen levels will be beneficial, such as respiration stress or anaerobic soil conditions that contribute to black layer or algae formation.

### PACKAGING

4 x 5 L jugs

### RATE

5 - 10 L/ha



## OMG!!! (UNRAVEL CELLULOSE)

OMG!!! (Organic Matter Gone) accelerates decomposition of cellulose, the largest component of thatch. OMG!!! contains a concentrated mixture of naturally occurring enzymes that duplicates those found in nature. These enzymes break down the cellulose residue of stems and leaves, leading to their conversion to nutrients. Extend and enhance aeration benefits with OMG!!!.



### PACKAGING

2 x 10 L jugs, 113 L drum,  
208 L drum

### RATE

10 L/ha

## FIGHT'S ON 0-5-18 + 3.6 Si (CELLULAR STRENGTH & ENERGY)

Fight's On is a one-two punch to prevent stressed-out turf and offers more than a fighting chance. With a heavyweight dose of 3.6% silicon for cell strength, stress and wear tolerance along with a proprietary stabilized phosphite for a boost of energy, this is a great soil application to get your turf through the toughest of rounds.



### PACKAGING

2 x 10 L jugs, 113 L drum,  
208 L drum, 1000 L tote

### RATE

10 - 20 L/ha

## SOIL PRODUCTS

PRODUCT	PACKAGING	RATE
<p><b>PROPEL</b></p> <p>Propel is a soil conditioner designed for fairway use and provides Floratine's liquid humic acid and superior penetrating wetting agent. Propel will decrease soil nutrient tie-ups and promote the movement of excess water through the soil.</p>	2 x 10 L jugs 113 L drum 208 L drum 1000 L tote	10 - 20 L/ha
<p><b>EON BIO</b></p> <p>Eon Bio contains the same great humic acid component found in Eon 75 with the added benefit of endomycorrhizal fungi, which promote a symbiotic relationship with the roots. This relationship enhances soil structure, promotes growth and helps plants solubilize phosphorus and resist environmental stress.</p>	10 kg pail	100 kg/ha
<p><b>QUAD K 0-0-45</b></p> <p>Quad K 0-0-45 is a potassium soluble powder designed to maximize immediately available potassium in the soil. Advanced formulation contains micronized humic acid powder for soil conditioning, nutrient retention and moisture management.</p>	20 kg pail	20 kg/ha (1 pail/ha)
<p><b>TRICAL® 35-SP</b></p> <p>The highest concentration of soluble calcium anywhere. Trical 35-SP contains 35% precipitated calcium carbonate forming a dry, soluble powder that dissolves easily in water. Trical 35-SP delivers readily available calcium to the crown area of turf. Trical 35-SP is an effective soil buffer for salts and other toxicities. Contains newly added micronized humic acid powder.</p>	6.8 kg pail 455 kg sack	10 - 20 kg/ha
<p><b>DEFENSE-CUZN</b></p> <p>Defense-CuZn is designed to help correct identified copper and zinc deficiencies in the soil. It contains 23% Zn and 7% Cu with an organic acid chelate to ensure rapid plant availability and encourage microbial proliferation in the soil.</p>	4 x 0.5 kg jugs	1 kg/ha (2 jugs/ha)
<p><b>DEFENSE-MAG</b></p> <p>A concentrated 5.6% magnesium and 4.0% manganese formulation to ensure rapid plant availability. Organic acid chelation provides superior root absorption to optimize chlorophyll production and calcium and iron mobility. Contains micronized humic acid powder.</p>	4 x 1.6 kg jugs 16.3 kg pail	12.8 kg/ha (8 jugs/ha)
<p><b>DEFENSE-MAN</b></p> <p>Manganese is critical to stress tolerance, especially during conditions favorable to poor turf respiration or disease activity. Defense-Man is a concentrated 25% manganese organic acid chelate that also contains micronized humic acid powder. The organic chelation ensures rapid plant availability and encourages microbial proliferation in the soil. Uniquely packaged, dry powder in a one-gallon plastic mixing jug. Just add water, shake and pour into the sprayer.</p>	4 x 0.7 kg jugs 14.5 kg pail	2.8 kg/ha (4 jugs/ha)
<p><b>BORA BORA</b></p> <p>Bora Bora is a readily available boron source for addressing known boron deficiencies in turf. Boron is key for proper carbohydrate transport, improved cell wall synthesis and lignification, and increased root elongation.</p>	2 x 10 L jugs	0.83 - 5.0 L/ha

## SOIL PRODUCTS

### SOIL AMENDMENT USAGE GUIDELINES

**ROOTED IN SCIENCE™** Specialty amendments and treatments address soil structure and chemistry, moisture and oxygen management, and nutrient content and balances.

	Algae	Bicarbonates	Black Layer	Excess Moisture	Flushing	LDS	Low CEC	Low Organic Matter	Low Soil Oxygen	Low Soluble Ca	Microbial Activity	Moisture Retention	Nutrient Tie-Up	Salts & Toxicity	Sodium	Thatch	Stress Relief
Blackout	•																
Calphlex®		•			•					•			•	•	•		•
Eon 75							•		•		•						•
Eon Bio							•		•		•						•
Free 15							•				•		•				
Maxiplex		•				•	•	•		•	•	•	•	•			
OMG!!!																•	
Oxyflor	•		•	•					•		•		•				•
Pervade	•		•	•	•	•			•						•	•	
Propel	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Retain Pro						•	•	•				•				•	
Trical® 35-SP		•			•		•			•	•			•	•		•
Turgor®														•	•		•

### NUTRIENT ANALYSIS SUMMARY

PRODUCT	MAJOR			SECONDARY			MICRO						
	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Ca	Mg	S	B	Cu	Fe	Mn	Mo	Si	Zn
Bora Bora							6.0				0.018		
Defense-CuZn								7.0					23.0
Defense-Mag					5.60					4.0			
Defense-Man					0.50					25.0			
Fight's On		5.0	18.0									3.6	
P-48	10.0	48.0	8.0										
Quad K 0-0-45			45.0										
Spike						3.0			5.0	1.0			
Trical® 35-SP				35.0									
Turgor®			5.0			2.0						2.0	

# SPECIALTY

## PRODUCTS

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When it comes to your course, every detail matters. Floratine has developed a line of specialty products to address the specific needs of your turf—whether that's water management, improving color or providing a nutritional boost.



## RZA (ROOT ZONE AMENDMENT)

RZA is a ceramic root zone amendment that provides much desired stability for your turfgrass. The spheres allow for water infiltration, gas exchange, increased CEC and beneficial microbial proliferation. A must for your next turf renovation project or aeration.

**PACKAGING**  
907.18 kg sack  
50 x 18.2 kg bags (1 pallet minimum)



## RETAIN PRO (HOLD WATER)

A nonionic retention agent that promotes uniform distribution of water into the root zone where its ingredients interact with soil molecules to retard leaching.

<b>PACKAGING</b>	<b>RATE</b>
2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	10 - 20 L/ha 20 - 30 L/ha (for extended moisture maintenance)

## RAIDER PLUS (ENHANCED UPTAKE)

Get the most from your spray applications with patented Raider Plus, an advanced spray adjuvant that improves the uptake of foliar-applied fertilizers and all other foliar applications. Raider Plus contains a patented ingredient that promotes rapid absorption of spray materials under a wide range of temperatures and weather conditions.

<b>PACKAGING</b>	<b>RATE</b>
2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	1.5 L/ha



## PERVADE (PUSH WATER)

A superior penetrating agent and soil penetrant that promotes quick and long-lasting movement of excess moisture into the soil. Pervade is nonburning and is 100% biodegradable.

<b>PACKAGING</b>	<b>RATE</b>
2 x 10 L jugs, 113 L drum, 208 L drum, 1000 L tote	2.5 - 5.0 L/ha



## ADJUVANTS



PRODUCT	PACKAGING	RATE
<b>BLACKOUT</b> Blackout is a unique blend of microbes and enzymes, which are target-specific. They aggressively compete for algae food sources and assist in the breakdown of surface residue left by algae proliferation.	2 x 10 L jugs	50 - 75 L/ha
<b>FP-747</b> FP-747 is a premium-quality spray adjuvant that effectively lowers the pH of spray solutions to enhance their effectiveness. FP-747 is a must for facilities with hard water or high bicarbonates.	4 x 5 L jugs	Mildly Alkaline Water 30 - 60 mL/100 L Highly Alkaline Water 60 - 120 mL/100 L
<b>PATHFINDER BLUE</b> A premium-quality, blue dye concentrate designed to assist spray applications.	20 x 114 g packets	1 - 3 packets / spray

## SEED TREATMENT

PRODUCT	PACKAGING	RATE
<b>GERMINEX TALC TG</b> An easy-to-use seed treatment containing secondary and micronutrients. Fortified with <i>Ascophyllum nodosum</i> and other naturally derived extracts for enhanced germination, early root development, vigor, stand uniformity and stress tolerance. A must for overseeding!	2 x 0.9 kg pails 4.08 kg pail	1 pail / 100 kg of seed Mix thoroughly, ensuring even blend with seed.

## SPECIALTY PRODUCTS

### PELLET APPLICATION

PRODUCT	PACKAGING
<b>MAXIPLEX PELLETS</b> Get the benefits of Maxiplex every time you water! Decrease soil nutrient tie-ups and improve your soil's capacity for air, nutrient and water availability with these easy-to-use pellets.	12 x 227 g pellets 2 x 3.18 kg magnum pellets
<b>PERVADE PELLETS</b> Pelletized infiltration technology for effective dispersion, uniform distribution and reduced hydrophobicity on overlooked areas such as berms, undulating greens, roughs and sloping terrain.	12 x 227 g pellets 2 x 3.18 kg magnum pellets
<b>RETAIN-MAX PELLETS</b> A proprietary blend of a retention-style wetting agent (Retain Pro) combined with humic acid (Maxiplex) for hand watering and syringing. Improves water availability to the turf and provides longer-lasting relief from soil moisture problems.	12 x 227 g pellets 2 x 3.18 kg magnum pellets
<b>TRICAL® PELLETS</b> A proprietary formulation of highly concentrated, precipitated calcium carbonate designed to ensure rapid availability of turf- and soil-available calcium.	12 x 227 g pellets
<b>PELLET PRO™ APPLICATOR</b> Pellet Pro applicator from Underhill for hose-end applications. Equipped with the Rainbow™ nozzle for syringing with best-in-market Floratine pellets.	
<b>FLAT FAN NOZZLES - 80° AND 110°</b> Performance of foliar chemical tank mixes depends on proper droplet size and placement. The advanced spray tip ensures maximum uptake of your systemic compounds while minimizing unwanted drift.	

### MAGNUM BAGS WITH LOOPS

Magnum bags are used to hold Floratine's Magnum Pellets. Place the pellets in the bag, then place the bag in your wet well for large-acreage applications of wetting agents. This method allows you to apply product over a large area and save on labor costs and time.

# ORDER OF ADDITION

10  
9  
8  
7  
6  
5  
4  
3  
2  
1

- 1 FP-747
- 2 CALSPRA-Mg
- 2 IRON MAID
- 2 KNIFE® PLUS
- 2 LARGO®
- 3 HIGH FIVE
- 3 PHLEX-MAG
- 3 PHLEX-MAN
- 4 ASTRON®
- 4 5.0 CAL
- 5 P-48
- 5 PAS-PORT
- 5 PER "4" MAX
- 5 PERK UP
- 5 X-FACTOR 12-6-0
- 5 RENAISSANCE
- 5 X-FACTOR 7-7-7
- 5 X-FACTOR 18-3-6
- 5 X-FACTOR 28-0-0
- 6 FLORADOX® PRO
- 6 GLYCOFUZE™
- 6 X-FACTOR 4-4-16
- 6 PROTESYN®
- 6 UVEX 186
- 6 X-FACTOR 23-0-0 + Mo
- 6 X-FACTOR 24-0-0 + Mo
- 7 X-FACTOR 0-0-22
- 7 X-FACTOR 12-0-12 (SRN)
- 8 PK FIGHT® 0-0-28
- 8 X-FACTOR 25-0-0 (SRN)
- 9 RAIDER PLUS

## FOLIAR PRODUCTS

For best results, mix products in order, **LOWEST** number to **HIGHEST** number. Refer to product label for respective product numbers.

**DO NOT MIX SOIL AND FOLIAR PRODUCTS IN THE SAME TANK.**

- 1 FP-747
- 1 OXYFLOR
- 1 PERVADE
- 1 RETAIN PRO
- 2 DEFENSE-CUZN
- 2 DEFENSE-MAG
- 2 DEFENSE-MAN
- 2 QUAD K 0-0-45
- 3 CALPHLEX®
- 3 PHLEX-MAG
- 3 PHLEX-MAN
- 5 BLACKOUT
- 5 P-48
- 5 OMG!!!
- 5 TRICAL® 35-SP
- 5 FREE 15
- 5 SPIKE
- 5 BIO M.R.E.
- 6 FLORADOX® PRO
- 6 PROPEL
- 6 PROTESYN®
- 7 BORA BORA
- 8 MAXIPEX
- 8 OPERATORS
- 8 PATHFINDERS
- 9 TURGOR®
- 9 FIGHT'S ON

## SOIL PRODUCTS

For best results, mix products in order, **LOWEST** number to **HIGHEST** number. Refer to product label for respective product numbers.

**DO NOT MIX SOIL AND FOLIAR PRODUCTS IN THE SAME TANK.**

10  
9  
8  
7  
6  
5  
4  
3  
2  
1

# WHEEL OF SOLUTIONS



# SUMMER HEAT STRESS

# BEAT THE HEAT

When summer hits, high temperatures further inhibit the photosynthetic process of low cut greens and cause respiration rates to increase. Heat stress stops turf from creating and maintaining the proper amount of carbohydrates to sustain basic plant processes, conserve energy, and thrive.



## PHOTOSYNTHETIC STRESS

Reduced photosynthetic efficiency caused by low height of cut and high temperatures reduces naturally occurring carbohydrate production and protein synthesis.



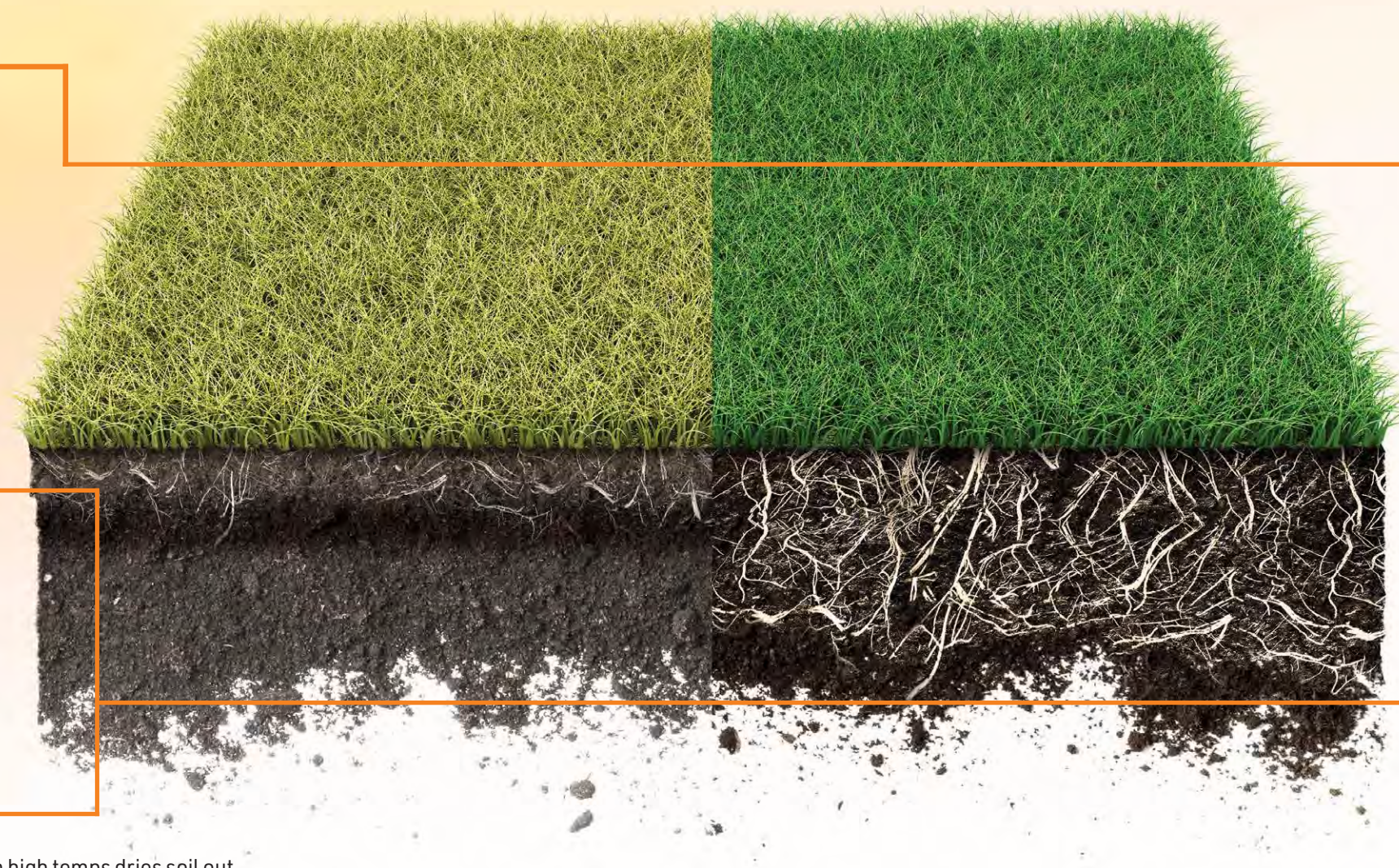
## RESPIRATION STRESS

Excessive heat and humidity increases respiration rates, creating greater demand for soil carbon and oxygen that roots and beneficial microbes require.



## EVAPORATION

Evaporation resulting from high temps dries soil out, leading to compaction, which can prevent proper nutrient uptake and affect turfgrass health.



**PERK UP**  
HEAT STRESS RELIEF  
LEARN MORE ON [PAGE 13](#)



**PROTESYN®**  
PROTEIN SYNTHESIS  
LEARN MORE ON [PAGE 15](#)



**MAXIPLEX**  
SOIL CATALYST  
LEARN MORE ON [PAGE 24](#)



**OXYFLOR**  
INFUSE OXYGEN  
LEARN MORE ON [PAGE 27](#)





*Rooted in Science™*

**FLORATINE PRODUCTS GROUP**

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