



Naturally different

PRODUCT CATALOG



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GROGREEN

Naturally different

The story

We're Lima Europe NV, a Belgian company located in Rumst, and we've been making top-quality plant nutrition products since 1999. Think of us as your global neighbours, supplying farmers and distributors worldwide with solutions that truly make a difference.

What sets us apart? We're always working on new ideas. Our dedicated research team right here in Belgium is constantly developing smarter ways to help your crops thrive. In fact, we were the first to bring revolutionary "gel nutrition" to farms. This means your crops get nutrients more efficiently, leading to healthier plants, improved stress resistance, and ultimately, higher yields and better quality produce. Our in-house R&D isn't just about science; it's about solving your challenges and ensuring you get products backed by rigorous testing and scientific expertise.

GROGREEN Naturally Different

GROGREEN is our main brand, and it's known and trusted by farmers everywhere. We offer a wide range of products, so you're sure to find what your crops need, from seedling to harvest. Whether you're growing maize, potatoes, or delicate fruits, our broad portfolio provides tailored solutions for every crop and every challenge, ensuring optimal nutrition year-round.

Our slogan, "**Naturally different**", isn't just a catchy phrase. It means two things:

- We genuinely stand out. Our products and our approach are simply different from others in the market. We're not just following the crowd; we're leading the way in plant nutrition technology.
- It's natural for us to be different. We're always innovating and looking for better solutions, so it's only natural that our products deliver exceptional results, helping you grow more with less.

Look at our GROGREEN logo: you'll see three linked circles. These represent innovation (always coming up with new ideas), connectivity (how our products work together and connect with your needs), and growth (helping your crops and your business grow). The smaller, unlinked circle? That's us – standing out from the rest, offering you something truly unique and effective.

Ready to see the GROGREEN difference on your farm?

Contact your local distributor today to learn more about our tailored solutions and how we can help you achieve your best harvest yet!

Mission and values

At Lima Europe, our mission is to empower farmers worldwide with science-driven, innovative plant nutrition solutions that deliver healthier crops, higher yields, and more sustainable farming. Through our GROGREEN brand, we combine rigorous in-house research with a deep understanding of growers' challenges to create products that are not only effective, but also tailored, practical, and future-focused.

We envision a future where every farmer has access to smarter, more efficient, and environmentally responsible solutions that allow crops to thrive under any condition, while safeguarding soil, water, and ecosystems for generations to come. As pioneers in gel technology and next-generation solutions like RHEON®, we are committed to staying naturally different: leading through innovation, connected to growers' real needs, and dedicated to advancing agriculture with integrity and impact.

GROGREEN INNOVATIONS

Our Ongoing Commitment to Innovation

Innovation is not a milestone — it is our philosophy. With our dedicated in-house R&D department, we continuously refine both products and processes to ensure:

- More efficient nutrient solutions
- Smarter, sustainable practices
- Better outcomes for growers and the environment

At GROGREEN, every innovation carries one purpose: to help farmers achieve healthier crops, higher yields, and a more sustainable future.

Gel Technology - Pioneering Nutrient Delivery

More than a decade ago, **GROGREEN** reshaped modern agriculture with the introduction of gel-based fertilisers.

This breakthrough technology combines the concentration of powders with the advanced additive capabilities of liquids, delivering unmatched precision in crop nutrition.

- Higher nutrient efficiency: exceptional purity and solubility ensure optimised delivery, faster uptake, and quicker plant response.
- Improved retention & adhesion: nutrients remain in the root zone and adhere firmly to leaves, reducing losses from leaching or wash-off.
- Stronger plant resilience: gels support water management, protect sensitive ingredients, and strengthen crops against stress.
- Sustainability & cost savings: cleaner irrigation systems, less waste, and lower input volumes means healthier soils, reduced environmental impact, and real economic value.

GROGREEN Gel is not just a fertiliser — it is a trusted system for healthier crops, sustainable practices, and measurable returns.





RHEON® Technology - The Next Leap Forward

Building on the success of gels, we now present RHEON®, our patented in-house innovation. This instantly soluble liquid represents a new standard in concentrated plant nutrition.

- 100% Clear & salt-free: unlike suspensions or gels, RHEON® contains no visible salts, only transparent, highly efficient solutions.
- Instant solubility: no waiting, no residues. Every drop is immediately available for plant uptake.
- Safe, even at high concentrations: can be applied in higher concentrations without risk of crop damage.
- Designed for the future: perfectly suited for drone and precision applications, ensuring faster, smarter farming.

At the core of RHEON® is the science of Deep Eutectic Solvents (DES). A breakthrough solvent system that allows nutrients and biostimulants to remain in stable, highly concentrated solution.

The result: maximum efficiency, minimum complexity.

Fusion

The Fusion range represents a new generation of foliar nutrition, combining Rheon® technology with concentrated organo-mineral NPK fertilisers. Unlike conventional formulations, Fusion products are true clear solutions: instantly soluble, residue-free, and safe to apply even at high concentrations. Thanks to this breakthrough, Fusion fertilisers can be applied directly by drone or conventional sprayers without the need for prior dissolution. This saves valuable time, reduces the number of applications, and delivers rapid, efficient nutrition exactly where the plant needs it. By uniting NPK nutrition with biostimulant effects, Fusion empowers crops with both energy and resilience – a true innovation in modern precision farming.





Essentials

The backbone of plant nutrition

Just as every journey begins with the first step, GROGREEN Essentials provide the fundamental nutrition your crops need to grow strong from the very start.

The broad diet: Essentials deliver the balanced macro-nutrients that form the base of your fertilisation program, ensuring consistent energy and steady growth at every stage.

Strength from the roots up: by supporting vigorous root development and solid early growth, Essentials lay the groundwork for healthier, more resilient plants capable of reaching their full potential.

A reliable foundation: with a strong nutritional base in place, your entire crop management program becomes more effective. Essentials are the building blocks that make supplements more impactful and biotics more powerful — because lasting success starts with the right foundation.

Our Essentials group overview

- **GROGREEN Tailor made NPK:** precision nutrition, without compromise.
- **GROGREEN FIVE:** all-in-one gel-based nutritional solution throughout key growth stages.



GROGREEN TAILOR made NPK

Precision Nutrition, Without Compromise

No two farms are alike. Each crop, soil condition, and growing system requires a carefully balanced approach to nutrition. That's why GROGREEN develops tailor-made NPK solutions. These formulations are built to meet your exact requirements, supported by our scientific expertise.

Our NPK powders combine absolute purity with practical efficiency:

- 100% water soluble, ensuring instant availability to the plant.
- Chlorine-free and safe, protecting even the most sensitive crops.
- Scientifically optimised nutrient balance, enriched with secondary nutrients and micronutrients for complete coverage.
- Delivering precise nutrition where and when it is needed, maximising crop performance and reducing waste.
- Proven formulas for trusted results

GRINTA - Optimised for Soil-Grown Crops

Every Grinta blend is engineered around the specific nutrient demands of its target crop. This ensures nutrients are supplied in the right proportions, in the right form, at the right time. For the grower, that means simpler programs, stronger crops, and consistent results.

SUBTIL - Designed for Hydroponic Systems

For substrate-grown crops, Subtil offers a ready-to-use precision solution tailored for modern hydroponics.

- Performs reliably across diverse water qualities and growth stages.
- Compatible with both basic dosing pumps and fully automated AB-units.
- Provides consistent, balanced nutrition that supports yield and quality.

With Subtil, growers can rely on a clear, stable solution that adapts seamlessly to their system and crop needs.

TAILORED TO YOUR SUCCESS

Whether you choose a custom formulation or one of our proven solutions, GROGREEN empowers you with:

- Scientific accuracy in every formula
- Flexibility to meet unique challenges
- Tangible improvements in yield, crop health, and resource efficiency

With GROGREEN, you gain more than a fertiliser. You gain a partner in growth, committed to delivering nutrition strategies that secure better harvests today, and stronger foundations for tomorrow.

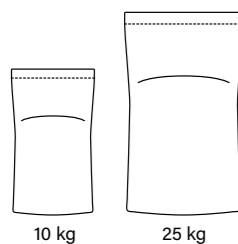


APPLICATION TIPS

For continuous feeding, use from 0,5 - 2 grams per litre of water. Standard dosage is around 1 gram per litre.

Apply during cooler parts of the day (early morning or late afternoon) to maximise absorption and minimise evaporation.

Always perform a compatibility test when mixing with other products.



Examples of formulations

Any formula that can be physically/chemically blended can be supplied.

High phosphorus	High nitrogen	Balanced	High potassium
10-52-10 + TE	30-10-10 + TE	20-20-20 + TE	12-12-36 + TE
13-40-13 + TE	28-14-14 + TE	19-19-19 + 1MgO + TE	5-10-43 + TE
12-42-12 + TE	28-10-10 + 2MgO + TE	18-18-18 + 2MgO + TE	10-5-40 + 2MgO + TE
15-30-15 + 2MgO + TE	25-10-10 + TE	17-17-17 + 3MgO + TE	15-5-30 + 3MgO + TE

GRINTA: Optimised for soil-grown crops

GRINTA Sola	14-10-26 + 3MgO + TE	tomato and pepper
GRINTA Curbi	17-8-22 + 3MgO + TE	(water)melon and cucumber
GRINTA Roca	17-8-20 + 3MgO + TE	roses and carnation
GRINTA Berry	14-7-26 + 3MgO + TE	berries

SUBTIL: Designed for hydroponic systems

SUBTIL Sola	7-11-37 + 3MgO + TE	tomato and pepper
SUBTIL Curbi	9-11-35 + 3MgO + TE	(water)melon and cucumber



GROGREEN NK 15-8 Bio

Organic Nutrition. Proven Performance.

GROGREEN NK 15-8 Bio is our first organic NK powder, combining concentrated plant-based nutrition with powerful biostimulant action. Fully compliant with EU Regulation 2018/848, it delivers reliable results for certified organic agriculture.

Key Advantages

- Plant-based nitrogen source with 83% free amino acids without the use of animal ingredients.
- Boosts resilience against stress from heat, frost, and drought.
- Low salt index: safe for roots, seedlings, and soil microbes.
- High solubility & purity: instantly soluble, free from heavy metals, sodium, and chlorine.
- Dual action: fertilisation + biostimulation for better yield and quality.

Application

Suitable for soil drenching or fertigation at 1-4 g/l, adaptable to crop needs and growth stages.

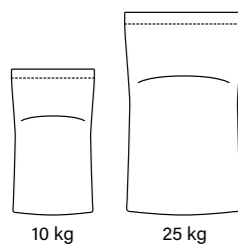
GROGREEN NK 15-8 Bio: Where organic farming meets scientific precision.

Since the product contains organic matter, it is advisable to close the packaging and follow storage conditions to prevent mold growth that may occur due to contamination inside the packaging.

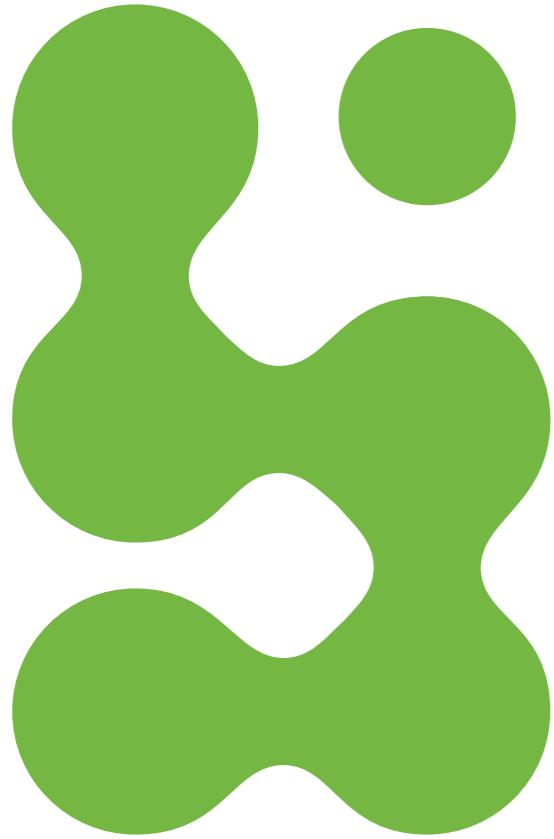
pH: 5,0	
Specifications	W/W
Total nitrogen (N)	15,00%
Organic nitrogen from vegetal amino acids	15,00%
Potassium Oxide (K ₂ O), soluble in water	8,00%
Sulphur Trioxide (SO ₃), soluble in water	7,00%
Organic Carbon (C)	26,00%
Dry matter	> 99,00%
Corg/N ratio	1,75

APPLICATION TIPS

Rinse equipment with clean water after application. Do not mix with products containing calcium. Store in a warehouse at temperatures between 5 and 25°C.



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GROGREEN FIVE

Essentials with a Difference

The **GROGREEN FIVE** range is part of our Essentials portfolio, created to provide growers with ready-to-use, all-in-one gel-based solutions that combine efficiency with reliability. Each formulation delivers a balanced NPK base, enriched with calcium, magnesium, and micronutrients, ensuring complete crop nutrition throughout key growth stages.

The range is built on three shared strengths:

- 3-in-1 functionality: complete NPK nutrition, calcium fortification, and drip-line acidification in a single product.
- Soil and system benefits: low-pH action prevents clogging, improves nutrient availability, and enhances soil structure.
- Stage-specific precision: three distinct formulations tailored to root development, vegetative growth, and fruit production.

The result is a streamlined gel-based fertigation approach that reduces complexity, safeguards irrigation systems, and maximises nutrient uptake.

THE PRODUCTS:

- FIVE Terra (NPK 12-44-12 + 6 CaO + 3 MgO + TE)
- FIVE Multi (NPK 20-20-20 + 6 CaO + 3 MgO + TE)
- FIVE Fructus (NPK 18-9-36 + 6 CaO + 3 MgO + TE)

With GROGREEN FIVE, growers gain a practical and efficient solution that supports healthy plants and consistent results, season after season.



GROGREEN FIVE Terra
High-phosphorus NPK with calcium & magnesium
NPK 12-44-12 + 6 CaO + 3 MgO + TE

FIVE Terra supports strong root establishment and flower initiation with its high-phosphorus formulation. Designed for drip irrigation, it combines complete crop nutrition with system-cleaning action to deliver superior efficiency.

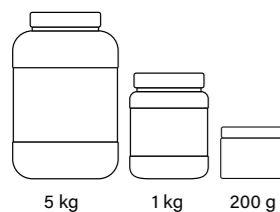
Key Advantages

- 3-in-1 action: complete NPK nutrition, calcium enrichment, and acidification in one product.
- Root & flower support: high phosphorus level promotes robust root systems and early flower development.
- Nutrient availability: low-pH formulation creates localised acidic zones, unlocking soil-bound nutrients.
- Anti-clogging: dissolves bicarbonate deposits and prevents scale buildup in drip lines and emitters.
- Improved soil health: polysaccharides enhance soil structure, porosity, and water-holding capacity.

Application Guidelines

- Stage: root growth after establishment and during flower initiation.
- Dosage: 12–20 kg/ha/application, 2–3 times per week.
- Continuous fertigation: 0,5–2 g/l (0,05–0,2%).

pH: 2,6		Density: +/- 1,6 kg/l	
Specifications	W/W	W/V	
Total nitrogen (N)	7,40%	12,00%	
Nitric nitrogen (N-NO ₃)	3,60%	5,90%	
Urea nitrogen (N-NH ₂)	3,80%	6,10%	
Total Phosphorus pentoxide (P ₂ O ₅)	27,00%	44,00%	
Phosphorus pentoxide (P ₂ O ₅), soluble in water	27,00%	44,00%	
Phosphorus pentoxide (P ₂ O ₅), soluble in water and neutral ammonium citrate	27,00%	44,00%	
Potassium oxide (K ₂ O), soluble in water	7,40%	12,00%	
Calcium Oxide (CaO), soluble in water	3,90%	6,00%	
Magnesium Oxide (MgO), soluble in water	2,00%	3,00%	
Boron (B), as boric acid, soluble in water	0,010%	0,016%	
Copper (Cu), EDTA chelated, soluble in water	0,002%	0,003%	
Iron (Fe), EDTA chelated, soluble in water	0,050%	0,080%	
Manganese (Mn), EDTA chelated, soluble in water	0,023%	0,037%	
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%	
Zinc (Zn), EDTA chelated, soluble in water	0,010%	0,016%	



GROGREEN FIVE Multi
Balanced NPK with calcium & magnesium
NPK 20-20-20 + 6 CaO + 3 MgO + TE

FIVE Multi provides balanced nutrition for vigorous vegetative growth. Its all-in-one formulation simplifies fertigation by supplying essential macronutrients, calcium, magnesium, and micronutrients while keeping drip systems clean.

Key Advantages

- 3-in-1 action: complete NPK nutrition, calcium enrichment, and acidification in one product.
- Balanced vegetative growth: classic 20-20-20 formula supports all-round development.
- Nutrient availability: low-pH formulation creates localised acidic zones, unlocking soil-bound nutrients.
- Anti-clogging: dissolves bicarbonate deposits and prevents scale buildup in drip lines and emitters.
- Improved soil health: polysaccharides enhance soil structure, porosity, and water-holding capacity.

Application Guidelines

- Stage: vegetative growth.
- Dosage: 12–20 kg/ha/application, 2–3 times per week.
- Continuous fertigation: 0,5–2 g/l (0,05–0,2%).

pH: 2,2		Density: +/- 1,55 kg/l	
Specifications	W/W	W/V	
Total nitrogen (N)	13,20%	20,00%	
Nitric nitrogen (N-NO ₃)	6,80%	10,30%	
Urea nitrogen (N-NH ₂)	6,40%	9,70%	
Total Phosphorus pentoxide (P ₂ O ₅)	13,20%	20,00%	
Phosphorus pentoxide (P ₂ O ₅), soluble in water	13,20%	20,00%	
Phosphorus pentoxide (P ₂ O ₅), soluble in water and neutral ammonium citrate	13,20%	20,00%	
Potassium oxide (K ₂ O), soluble in water	13,20%	20,00%	
Calcium Oxide (CaO), soluble in water	3,90%	6,00%	
Magnesium Oxide (MgO), soluble in water	2,00%	3,00%	
Boron (B), as boric acid, soluble in water	0,010%	0,016%	
Copper (Cu), EDTA chelated, soluble in water	0,002%	0,003%	
Iron (Fe), EDTA chelated, soluble in water	0,050%	0,080%	
Manganese (Mn), EDTA chelated, soluble in water	0,023%	0,037%	
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%	
Zinc (Zn), EDTA chelated, soluble in water	0,010%	0,016%	



Naturally different



GROGREEN FIVE Fructus
High-potassium NPK with calcium & magnesium
NPK 18-9-36 + 6 CaO + 3 MgO + TE

FIVE Fructus is designed for fruit development and maturation, offering a potassium-rich formula that maximises yield quality. With added calcium, magnesium, and micronutrients, it ensures strong crops and reliable harvests.

Key Advantages

- 3-in-1 action: complete NPK nutrition, calcium enrichment, and acidification in one product.
- High potassium focus: supports fruit filling, quality, and uniform ripening.
- Nutrient availability: low-pH formulation creates localised acidic zones, unlocking soil-bound nutrients.
- Anti-clogging: dissolves bicarbonate deposits and prevents scale buildup in drip lines and emitters.
- Improved soil health: polysaccharides enhance soil structure, porosity, and water-holding capacity.

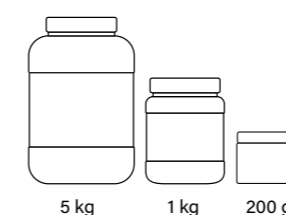
Application Guidelines

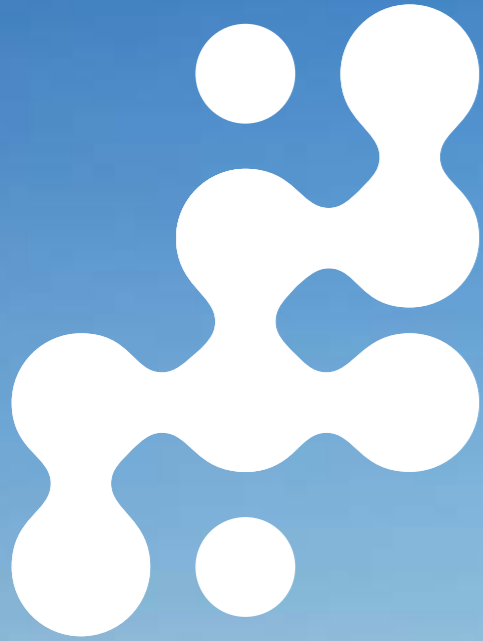
- Stage: fruit development stage.
- Dosage: 12–20 kg/ha/application, 2–3 times per week.
- Continuous fertigation: 0,5–2 g/l (0,05–0,2%).

APPLICATION TIP

Shake well before use.
 Apply in cooler hours.
 Test compatibility before mixing.
 Do not mix with other NPK, phosphate, or sulphate fertilisers. Compatible with calcium nitrate.

Specifications	W/W	W/V
Total nitrogen (N)	11,25%	18,00%
Nitric nitrogen (N-NO ₃)	9,10%	14,60%
Urea nitrogen (N-NH ₂)	2,15%	3,40%
Total Phosphorus pentoxide (P ₂ O ₅)	5,70%	9,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	5,70%	9,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water and neutral ammonium citrate	5,70%	9,00%
Potassium oxide (K ₂ O), soluble in water	22,70%	36,00%
Calcium Oxide (CaO), soluble in water	3,90%	6,00%
Magnesium Oxide (MgO), soluble in water	2,00%	3,00%
Boron (B), as boric acid, soluble in water	0,010%	0,016%
Copper (Cu), EDTA chelated, soluble in water	0,002%	0,003%
Iron (Fe), EDTA chelated, soluble in water	0,050%	0,080%
Manganese (Mn), EDTA chelated, soluble in water	0,023%	0,037%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%
Zinc (Zn), EDTA chelated, soluble in water	0,010%	0,016%





Supplements

Just as athletes use supplements to optimise their performance, GROGREEN Supplements provide targeted boosts that go beyond basic nutrition.

Precision tools: while Essentials provide the broad diet, Supplements deliver specific micronutrients or specialised formulas designed to fine-tune your crop's nutritional balance.

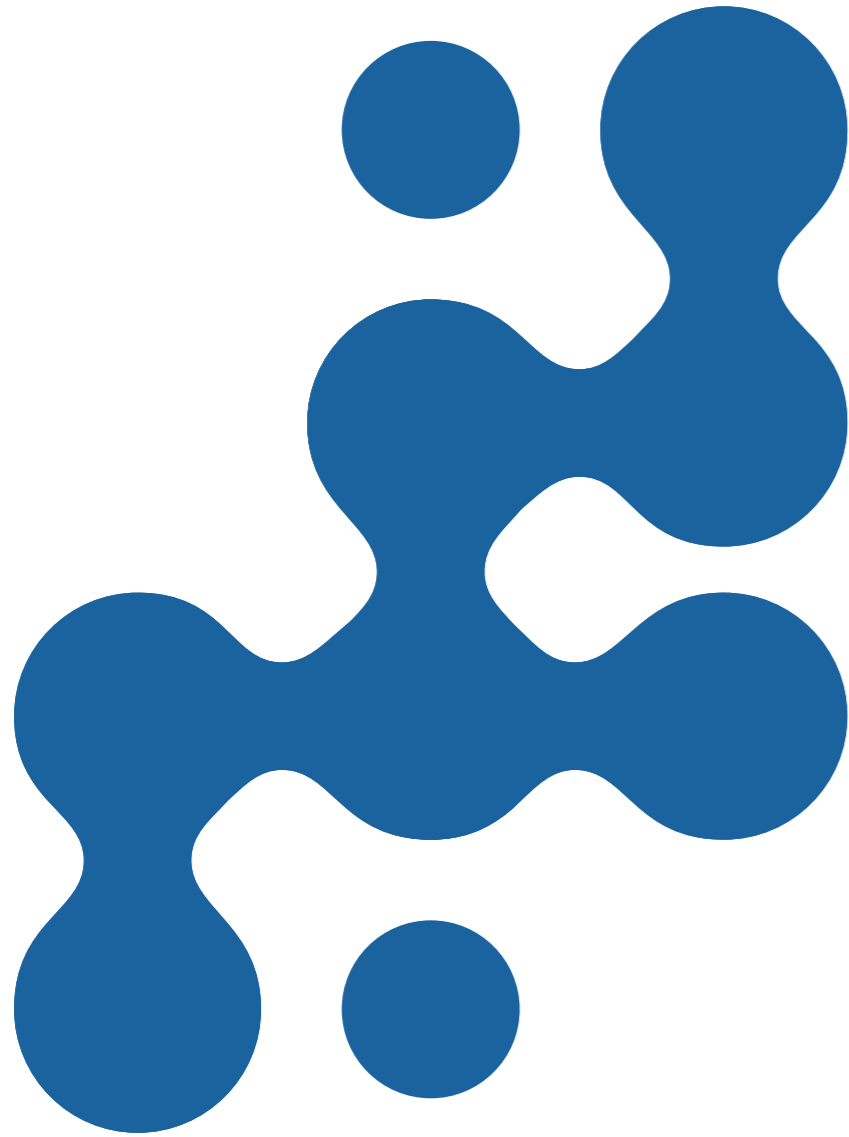
Unlock hidden potential: facing specific nutrient deficiencies or aiming for peak performance at critical growth stages? Our Supplements are designed to ensure your crops receive every element they need, leading to enhanced flowering, improved fruit set, and overall vigour.

Maximise your investment: by achieving optimal nutrition, your plants become inherently healthier and more robust which translates into even higher yields and premium quality produce, ensuring a better return on your efforts.

Our Supplements group overview

- **GROGREEN GEL CORRECTORS:** combining the high concentration of powders with the useful additives used in liquid formulations.
- **GROGREEN GROLEAF:** concentrated foliar nutrition for brilliant results.
- **GROGREEN MICRONUTRIENTS:** high-quality micronutrient solutions.





GROGREEN GEL CORRECTORS

Foliar feeding provides fast, on-the-spot nutrition to ensure high and top quality yields.
It is an effective supplementary feeding to complete soil fertilisation and promptly correct nutrient deficiencies.
Foliar application of nutrients at specific stages of crop development boosts yield and improves quality.

GROGREEN gel products have been present in the market for the last 15 years. With their very high concentration, low pH and adjuvants, they represent the perfect product line to use for foliar feeding with a proven track record in the field. The advantages of both powder and liquid fertilisers merge in GROGREEN products combining the high concentration of powders with the useful additives used in liquid formulations.

The gel structure optimises the efficiency of the application by:

- Improving and increasing absorption and retention of nutrients on the foliage
- Reduction of surface tension of the spray solution on the leaves, increasing water retention and promoting stomatal opening
- Allowing better and easier dosage
- Facilitating the dissolution and, therefore, the assimilation of the nutrients in the plant's metabolism
- Improving efficiency of agrochemicals due to low pH
- Helping plants recover from stress impact
- Enhancing water solubility

THE PRODUCTS:

- Starter (NPK 16-69-16 + TE)
- Vegetative (NPK 27-27-27 + 3 MgO + TE)
- Calciphos (NP 9-64-0 + 11 CaO + 1 MgO + B + Zn)
- Fruit (NPK 18-11-59 + 2 MgO + TE)
- Brassica (NPK 9-9-39 + 6,6 MgO + 53,9 SO₃ + TE)
- P-K-S (NPK 7,7-47,4-44,3 + 3,2 CaO + 13,7 SO₃ + TE)
- Ca-B-Sul (CaO + B + SO₃ + Glycine Betaine)
- Magic (Mg + Fe + Mn + Zn)
- Micro (Amino-acid chelated micronutrients)
- Blue-S (B + S + Zn + Mo)
- Cu-re (Copper suspension with amino acids)
- Biogel (NK 10-5)



GROGREEN Starter

High-phosphorus boost for rooting & flowering

NPK 16-69-16 + TE

GROGREEN Starter delivers a powerful phosphorus supply enriched with trace elements, tailored for stages of high demand such as transplanting, root development, flowering, and fruit set. Fully soluble with a naturally low pH, it ensures excellent foliar uptake and tank-mix compatibility, even in hard water.

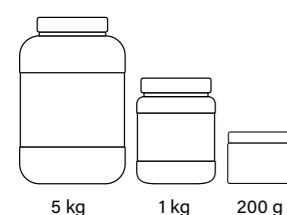
Key Advantages

- Provides a concentrated phosphorus boost that drives strong root development, flower initiation, and fruit setting at the most critical growth phases.
- Fully water-soluble formulation ensures rapid dissolution, uniform foliar coverage, and efficient uptake by the plant.
- Naturally low pH improves the stability and efficiency of pesticide tank mixes, especially in hard or alkaline water conditions.
- A reliable solution to secure early crop vigour, balanced development, and a strong foundation for yield.

Application Guidelines

- Stage: after transplanting, rooting, pre-flowering.
- Dosage: drip 5-10 kg/ha/application; foliar 2-5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

Specifications	W/W	W/V
pH: 2,3 Density: +/- 1,64 kg/l		
Total nitrogen (N)	9,70%	16,00%
Ammoniacal nitrogen (N-NH ₃)	2,50%	4,10%
Urea nitrogen (N-NH ₂)	7,20%	11,90%
Total Phosphorus pentoxide (P ₂ O ₅)	42,00%	69,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	42,00%	69,00%
Phosphorus pentoxide (P ₂ O ₅) soluble in water and neutral ammonium citrate	42,00%	69,00%
Potassium Oxide (K ₂ O), soluble in water	9,70%	16,00%
Boron (B), as boric acid, soluble in water	0,010%	0,016%
Copper (Cu), EDTA chelated, soluble in water	0,002%	0,003%
Iron (Fe), EDTA chelated, soluble in water	0,050%	0,082%
Manganese (Mn), EDTA chelated, soluble in water	0,025%	0,041%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%
Zinc (Zn), EDTA chelated, soluble in water	0,010%	0,016%



GROGREEN Vegetative

Balanced NPK for a strong growth

NPK 27-27-27 + 3 MgO + TE

GROGREEN Vegetative provides rapid, balanced nutrition with its 1:1:1 NPK ratio, reinforced by magnesium and trace elements. This highly concentrated formula supports photosynthesis, corrects deficiencies, and drives strong vegetative growth when soil uptake is limited.

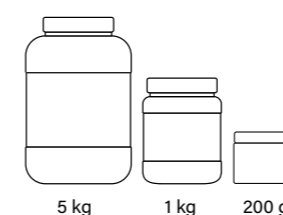
Key Advantages

- Supplies balanced NPK in equal ratios, ensuring steady growth across vegetative, flowering, and fruiting phases.
- Enriched with magnesium and trace elements to boost chlorophyll production, energy transfer, and stress tolerance.
- Acts as a fast and effective tool to correct unforeseen nutrient deficiencies and maintain crop health.
- Fully soluble and versatile, suitable for both foliar application and fertigation systems without risk of clogging.

Application Guidelines

- Stage: vegetative growth, multipurpose use.
- Dosage: drip 5-10 kg/ha/application; foliar 2-5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

Specifications	W/W	W/V
pH: 2,2 Density: +/- 1,63 kg/l		
Total nitrogen (N)	16,60%	27,00%
Nitric nitrogen (N-NO ₃)	3,60%	5,90%
Urea nitrogen (N-NH ₂)	13,00%	21,10%
Total Phosphorus pentoxide (P ₂ O ₅)	16,60%	27,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	16,60%	27,00%
Phosphorus pentoxide ((P ₂ O ₅) soluble in water and neutral ammonium citrate	16,60%	27,00%
Potassium Oxide (K ₂ O), soluble in water	16,60%	27,00%
Magnesium Oxide (MgO), soluble in water	2,00%	3,30%
Boron (B), as boric acid, soluble in water	0,010%	0,016%
Copper (Cu), EDTA chelated, soluble in water	0,002%	0,003%
Iron (Fe), EDTA chelated, soluble in water	0,050%	0,082%
Manganese (Mn), EDTA chelated, soluble in water	0,025%	0,041%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%
Zinc (Zn), EDTA chelated, soluble in water	0,010%	0,016%





GROGREEN Calciphos

High-phosphorus NP with calcium for tubers, roots & flowers

NP 9-64-0 + 11 CaO + 1 MgO + B + Zn

GROGREEN Calciphos combines high phosphorus with calcium, magnesium, boron, and zinc to support tuber initiation, tillering, flowering, and fruit development. It improves root growth, strengthens cell walls, reduces fruit decay, and enhances firmness, vigour, and yield.

Key Advantages

- Provides concentrated phosphorus to fuel root development, flower preparation, and tuber or grain initiation during critical stages.
- Supplies calcium in a readily available form to strengthen cell walls, reducing fruit decay and extending shelf life.
- Enhances plant resistance against mechanical damage, lodging, and pest pressure through improved tissue integrity.
- Increases crop vigour and supports higher yields by improving fruit set and the number of marketable products.

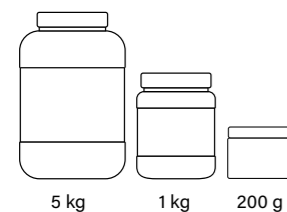
Application Guidelines

- Stage: rooting, flowering, fruiting, tuber initiation.
- Dosage: drip 5–10 kg/ha/application; foliar 2–5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

Specifications	W/W	W/V
Total nitrogen (N)	5,50%	9,00%
Nitric nitrogen (N-NO ₃)	0,50%	0,80%
Urea nitrogen (N-NH ₂)	5,00%	8,20%
Total Phosphorus pentoxide (P ₂ O ₅)	39,30%	64,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	39,30%	64,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water and neutral ammonium citrate	39,30%	64,00%
Calcium Oxide (CaO), soluble in water	6,75%	11,00%
Magnesium Oxide (MgO), soluble in water	0,60%	1,00%
Boron (B), as boron MEA, soluble in water	0,11%	0,18%
Zinc (Zn), EDTA chelated, soluble in water	0,34%	0,56%

APPLICATION TIP

Shake well before use. Apply during cooler parts of the day to maximise absorption and minimise evaporation. Always perform a compatibility test when mixing with other products. Do not mix with alkaline materials, combustibles, reducing agents and sulfates



GROGREEN Fruit

High-potassium nutrition for fruit development & ripening
NPK 18-11-59 + 2 MgO + TE

GROGREEN Fruit is a potassium-rich formula with added magnesium and trace elements, designed to support fruit filling, ripening, and maturation. Fully soluble and easy to apply, it enhances fruit size, firmness, colour, and sugar content, delivering both yield and quality improvements.

Key Advantages

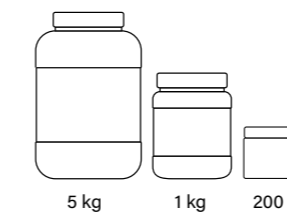
- Supplies abundant potassium to drive sugar accumulation, colour development, and uniform fruit ripening.
- Strengthens fruit quality by improving firmness and resistance to transport and storage stress.
- Magnesium supports photosynthesis and ensures sufficient energy for fruit filling and crop performance.
- Fully soluble formulation guarantees rapid uptake and safe application across multiple crop systems.

Application Guidelines

- Stage: fruit development and maturation.
- Dosage: drip 5–10 kg/ha/application; foliar 2–5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

APPLICATION TIP

Shake well before use. Apply during cooler parts of the day to maximise absorption and minimise evaporation. Always perform a compatibility test when mixing with other products. Do not mix with alkaline materials, combustibles, and reducing agents.



Specifications	W/W	W/V
Total nitrogen (N)	10,00%	18,00%
Nitric nitrogen (N-NO ₃)	4,20%	7,60%
Urea nitrogen (N-NH ₂)	5,80%	10,40%
Total Phosphorus pentoxide (P ₂ O ₅)	6,00%	11,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	6,00%	11,00%
Phosphorus pentoxide (P ₂ O ₅), soluble in water and neutral ammonium citrate	6,00%	11,00%
Potassium Oxide (K ₂ O), soluble in water	32,70%	59,00%
Magnesium Oxide (MgO), soluble in water	1,10%	2,00%
Boron (B), as boric acid, soluble in water	0,010%	0,018%
Copper (Cu), EDTA chelated, soluble in water	0,002%	0,004%
Iron (Fe), EDTA chelated, soluble in water	0,050%	0,090%
Manganese (Mn), EDTA chelated, soluble in water	0,025%	0,045%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,004%
Zinc (Zn), EDTA chelated, soluble in water	0,010%	0,018%



GROGREEN Brassica
Specialised formula for *Brassicaceae* crops
NPK 9-9-39 + 6,6 MgO + 53,9 SO₃ + TE

GROGREEN Brassica delivers high potassium, magnesium, and sulfur in a formulation tailored to the unique nutritional requirements of *Brassicaceae* crops. It can also be applied during fruit growth and maturation stages in other horticultural and agricultural crops.

Key Advantages

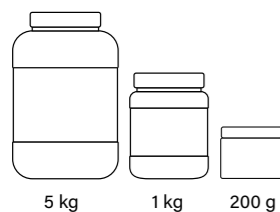
- Provides targeted nutrition for *Brassicaceae* crops, improving head size, firmness, and yield.
- High potassium ensures strong fruit development and improved crop quality.
- Magnesium and sulfur support chlorophyll formation, protein synthesis, and energy transfer.
- Fully soluble formula guarantees quick uptake and reliable performance in fertigation or foliar systems.

Application Guidelines

- Stage: fruit development and maturation.
- Dosage: drip 5–10 kg/ha/application; foliar 2–5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

pH: 2,3 Density: +/- 1,75 kg/l

Specifications	W/W	W/V
Total nitrogen (N)	5,10%	9,00%
Urea nitrogen (N-NH ₂)	5,10%	9,00%
Total Phosphorus pentoxide (P ₂ O ₅)	5,40%	9,45%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	5,40%	9,45%
Phosphorus pentoxide (P ₂ O ₅), soluble in water and neutral ammonium citrate	5,40%	9,45%
Potassium Oxide (K ₂ O), soluble in water	22,00%	38,50%
Magnesium Oxide (MgO), soluble in water	3,80%	6,60%
Sulphur Trioxide (SO ₃), soluble in water	30,80%	53,90%
Boron (B), as boric acid, soluble in water	0,010%	0,017%
Copper (Cu), EDTA chelated, soluble in water	0,002%	0,003%
Iron (Fe), EDTA chelated, soluble in water	0,050%	0,087%
Manganese (Mn), EDTA chelated, soluble in water	0,025%	0,044%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%
Zinc (Zn), EDTA chelated, soluble in water	0,010%	0,017%



GROGREEN P-K-S
PK fertiliser for crucial growth stages:
rooting, flowering & maturation
NPK 7,7-47,4-44,3 + 3,2 CaO + 13,7 SO₃ + TE

GROGREEN P-K-S is a gel fertiliser rich in phosphorus, potassium, and sulfur, designed for use at rooting, flowering and crop finishing stages. With its low nitrogen content, it prevents excess vegetative growth while focusing energy on reproduction and fruit quality.

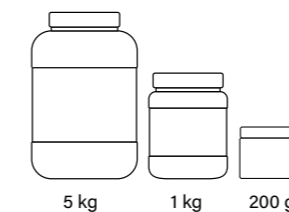
Key Advantages

- Provides phosphorus for root establishment and flowering initiation.
- High potassium improves fruit ripening, sugar content, and coloration.
- Sulfur and calcium support protein synthesis and post-harvest firmness.
- Acidic pH improves nutrient uptake and keeps irrigation systems clean.
- Ensures a profitable finish with higher quality and longer shelf life.

Application Guidelines

- Stage: root establishment, flowering, crop finishing.
- Dosage: drip 5–10 kg/ha/application; foliar 2–5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

APPLICATION TIP
Shake well before use. Apply during cooler parts of the day to maximise absorption and minimise evaporation. Always perform a compatibility test when mixing with other products. Do not mix with alkaline materials, combustibles, reducing agents and sulfates.



pH: 2,8 Density: +/- 1,75 kg/l

Specifications	W/W	W/V
Total nitrogen (N)	4,40%	7,70%
Nitric nitrogen (N-NO ₃)	2,60%	4,55%
Ammoniacal Nitrogen (N-NH ₄)	0,40%	0,70%
Urea nitrogen (N-NH ₂)	1,40%	2,45%
Total Phosphorus pentoxide (P ₂ O ₅)	27,10%	47,40%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	27,10%	47,40%
Phosphorus pentoxide (P ₂ O ₅) soluble in water and neutral ammonium citrate	27,10%	47,40%
Potassium Oxide (K ₂ O), soluble in water	25,40%	44,30%
Calcium Oxide (CaO), soluble in water	1,80%	3,20%
Sulphur trioxide (SO ₃), soluble in water	7,80%	13,70%
Boron (B), as boric acid, soluble in water	0,010%	0,018%
Copper (Cu), chelated by EDTA, soluble in water	0,002%	0,004%
Iron (Fe), chelated by EDTA, soluble in water	0,050%	0,088%
Manganese (Mn), chelated by EDTA, soluble in water	0,025%	0,044%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,004%
Zinc (Zn), chelated by EDTA, soluble in water	0,010%	0,018%



GROGREEN Ca-B-Sul
 Ensure high flowering & fruit quality
 CaO + B + SO₃ + Glycine Betaine

GROGREEN Ca-B-Sul is a calcium fertiliser fortified with boron, sulfur, and glycine betaine, designed to enhance flowering, fruit set, and quality. Its nitrogen-free composition prevents excess vegetative growth, while the unique formulation improves fruit firmness, stress tolerance, and post-harvest longevity.

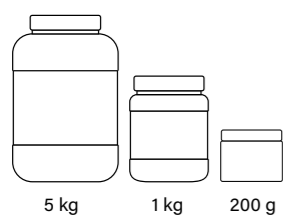
Key Advantages

- Provides highly available calcium and boron to strengthen flowers, fruit set, and early cell division.
- Prevents blossom end rot, bitter pit, tip burn, and other calcium-related physiological disorders.
- Boron supports sugar transport and reproductive development, ensuring uniform fruit sizing.
- Glycine betaine improves tolerance to drought and salinity, reducing flower abortion and crop stress.
- Enhances firmness, resilience, and shelf life, securing profitability from field to consumer.
- Precise nutrition for controlled growth during the reproductive and fruit-filling stages, directing the plant's energy where it matters most.

Application Guidelines

- Stage: flowering and fruiting.
- Dosage: drip 5–10 kg/ha/application; foliar 3–8 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

pH: 4,7		Density: +/- 1,45 kg/l	
Specifications	W/W	W/V	
Calcium Oxide (CaO), soluble in water	16,4%	23,8%	
Sulphur Trioxide (SO ₃), soluble in water	21,3%	30,9%	
Total Boron (B), soluble in water	1,74%	2,53%	
Boron (B), as boric acid, soluble in water	0,76%	1,11%	
Boron (B), as boron monoethanolamine, soluble in water	0,98%	1,42%	
Glycine Betaine	5,5%	8,0%	



GROGREEN Magic
 Magnesium nutrition for photosynthesis & plant vitality
 Mg + Fe + Mn + Zn

GROGREEN Magic is a gel fertiliser formulated to correct magnesium deficiencies and improve photosynthesis efficiency. Enriched with trace elements and complexed with lignosulfonates, it ensures rapid uptake, strong foliar adhesion, and reduced risk of wash-off or leaf burn.

Key Advantages

- Corrects magnesium deficiencies, restoring chlorophyll levels and photosynthetic capacity.
- Improves fruit yield and quality by supporting energy supply and reducing premature fruit drop.
- Lignosulfonates act as natural chelators, enhancing uptake and distribution across the leaf surface.
- Reduces risk of foliar scorch compared to conventional salts and improves rainfastness.
- Strengthens crop vigour and resilience for stable productivity.

Application Guidelines

- Stage: vegetative growth, deficiency correction.
- Dosage: drip 10–15 kg/ha/application; foliar 3–5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

pH: 4,0		Density: +/- 1,35 kg/l	
Specifications	W/W	W/V	
Total nitrogen (N)	7,30%	9,85%	
Nitric nitrogen (N-NO ₃)	7,30%	9,85%	
Magnesium Oxide (MgO), soluble in water	10,00%	13,50%	
Iron (Fe), EDTA-chelated, soluble in water	0,050%	0,068%	
Manganese (Mn), Lignosulfonate complex, soluble in water	0,027%	0,036%	
Zinc (Zn), Lignosulfonate complex, soluble in water	0,010%	0,014%	





GROGREEN Micro

Rapid-action micronutrient correction

Amino-acid chelated micronutrients

GROGREEN Micro is a multi-nutrient complex formulated with glycine chelation to deliver fast and safe foliar correction of deficiencies. It improves nutrient uptake, stimulates chlorophyll production, and supports plant metabolism while being biodegradable and environmentally safe.

Key Advantages

- Provides fast correction of multiple micronutrient deficiencies, ensuring crop growth is not limited.
- Glycine chelation guarantees superior absorption, translocation, and safety during foliar application.
- Stimulates chlorophyll synthesis and photosynthesis, boosting crop vigour and yield potential.
- Biodegradable formulation avoids environmental risks of synthetic chelates.
- Reduces risk of foliar burn compared to inorganic salts.

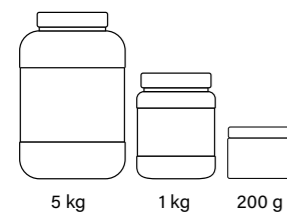
Application Guidelines

- Stage: critical growth stages, deficiency correction.
- Dosage: drip 2,5–6 kg/ha/application; foliar 0,5–1,5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

Specifications	W/W	W/V
pH: 4,7 Density: +/- 1,50 kg/l		
Total nitrogen (N)	3,70%	5,50%
Organic nitrogen (N), from glycine	3,70%	5,50%
Boron (B), as boron MEA, soluble in water	0,70%	1,06%
Copper (Cu), chelated by glycine, soluble in water	0,15%	0,23%
Iron (Fe), chelated by glycine, soluble in water	4,20%	6,30%
Manganese (Mn), chelated by glycine, soluble in water	1,70%	2,55%
Molybdenum (Mo), as sodium salt, soluble in water	0,12%	0,18%
Zinc (Zn), chelated by glycine, soluble in water	4,37%	6,56%
Organic Carbon (Corg)	8,20%	12,30%
Dry matter	65,40%	
Corg/N ratio	2,21	

APPLICATION TIP

Shake well before use. Apply during cooler parts of the day to maximise absorption and minimise evaporation. Always perform a compatibility test when mixing with other products. Do not mix with alkaline materials, combustibles, reducing agents, and calcium.



GROGREEN Blue-S

Increase quality traits with this dual-action Boron

B + S + Zn + Mo

GROGREEN Blue-S is a low-pH gel fertiliser combining boron and sulfur in a synergistic formulation, enriched with zinc and molybdenum. It ensures maximum boron availability, superior tank-mix compatibility, and improved efficiency of pesticide applications, particularly in oilseed crops.

Key Advantages

- Delivers high concentrations of boron and sulfur in a single, stable product for efficient application.
- Low pH enhances compatibility with pesticides, protecting their stability and boosting tank-mix efficacy.
- Supports reproductive growth by improving pollination, sugar transport, and oil accumulation in oilseed crops.
- Enhances overall nutrient uptake efficiency by optimising internal plant transport systems.
- Fully soluble gel allows rapid dissolution, accurate dosing, and improved farmer profitability.

Application Guidelines

- Stage: reproductive growth, deficiency correction.
- Dosage: drip 5–10 kg/ha/application; foliar 2–5 kg/ha/application.
- Concentration: max. 0,5% (5 g/l).

Specifications	W/W	W/V
pH: 2,7 Density: +/- 1,30 kg/l		
Total nitrogen (N)	4,30%	5,60%
Organic nitrogen (N) from amino acids	1,40%	1,80%
Urea nitrogen (N-NH ₂)	2,90%	3,80%
Sulphur Trioxide (SO ₃)	10,30%	13,40%
Total Boron (B), soluble in water	8,10%	10,53%
Boron (B), as boric acid, soluble in water	4,80%	6,24%
Boron (B), as boron MEA, soluble in water	3,30%	4,29%
Copper (Cu), chelated by EDTA, soluble in water	0,005%	0,006%
Iron (Fe), chelated by EDTA, soluble in water	0,150%	0,195%
Manganese (Mn), chelated by EDTA, soluble in water	0,066%	0,086%
Molybdenum (Mo), as sodium salt, soluble in water	0,285%	0,370%
Zinc (Zn), chelated by EDTA, soluble in water	0,026%	0,034%

APPLICATION TIP

Shake well before use. Apply during cooler parts of the day to maximise absorption and minimise evaporation. Always perform a compatibility test when mixing with other products. Do not mix with alkaline materials and products containing calcium.





GROGREEN Cu-re

Targeted copper nutrition for crop health

Copper suspension with amino acids

GROGREEN Cu-re is a high-quality suspension fertiliser formulated for foliar delivery of copper. Enhanced with amino acids, it improves uptake and reduces phytotoxicity risks. Cu-re strengthens enzyme systems, supports chlorophyll formation, and improves natural plant defenses for healthier crops and higher yields.

Key Advantages

- Rapidly corrects copper deficiencies, restoring healthy plant metabolism.
- Amino acids act as natural chelators, improving uptake and translocation.
- Strengthens chlorophyll production and enzyme activation for improved vigour.
- Enhances natural resistance to stress and disease.
- Safe and versatile across fruits, vegetables, cereals, and ornamentals.

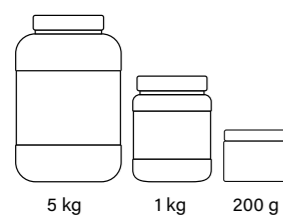
Application Guidelines

- Stage: deficiency correction, vegetative growth.
- Dosage: foliar 1–3 kg/ha/application.
- Concentration: 0,2–0,5% (reduce to 0,1% for sensitive crops).

Specifications	W/W	W/V
Nitrogen (N), soluble in water	5,5%	7,15%
Organic Nitrogen (N), from amino acids	5,5%	7,15%
Sulphur Trioxide (SO ₃), soluble in water	8,2%	10,66%
Copper (Cu), complexed by amino acids, soluble in water	6,5%	8,45%
Organic Carbon (C)	17%	22,1%
Dry matter	46,2%	60%

APPLICATION TIP

Shake well before use. Apply during cooler parts of the day to maximise absorption and minimise evaporation. Always perform a compatibility test when mixing with other products. Do not mix with strong basic substances.



GROGREEN Biogel

Organic NK fertiliser with biostimulant action

NK 10-5 (plant-based amino acids)

GROGREEN Biogel is an innovative organic NK gel fertiliser enriched with amino acids to improve nutrient absorption, crop vigour, and stress resilience. With its low salt index, low pH, and plant-based composition, it is ideal for organic farming and safe for repeated foliar use.

Key Advantages

- Provides readily available nitrogen and potassium for growth and yield.
- Amino acids enhance nutrient translocation and boost stress tolerance.
- Superior foliar efficacy with excellent wetting and leaf retention.
- Low pH stabilises pesticides in tank mixes, reducing the need for additives.
- Organic, plant-based, chlorine-free, and compliant with EU organic regulations.

Application Guidelines

- Stage: active growth, stress recovery.
- Dosage: foliar 2–3 g/l at 10-day intervals.
- Concentration: max. 0,5% (5 g/l).

Specifications	W/W	W/V
Total nitrogen (N)	8,00%	10,40%
Organic nitrogen, from vegetal amino acids	8,00%	10,40%
Potassium Oxide (K ₂ O), soluble in water	4,00%	5,20%
Sulphur Trioxide (SO ₃), soluble in water	3,75%	4,87%
Organic Carbon (Corg)	17,00%	22,10%
Dry matter	61,40%	
Corg/N ratio	3,30%	
Organic matter: 295 g/kg		

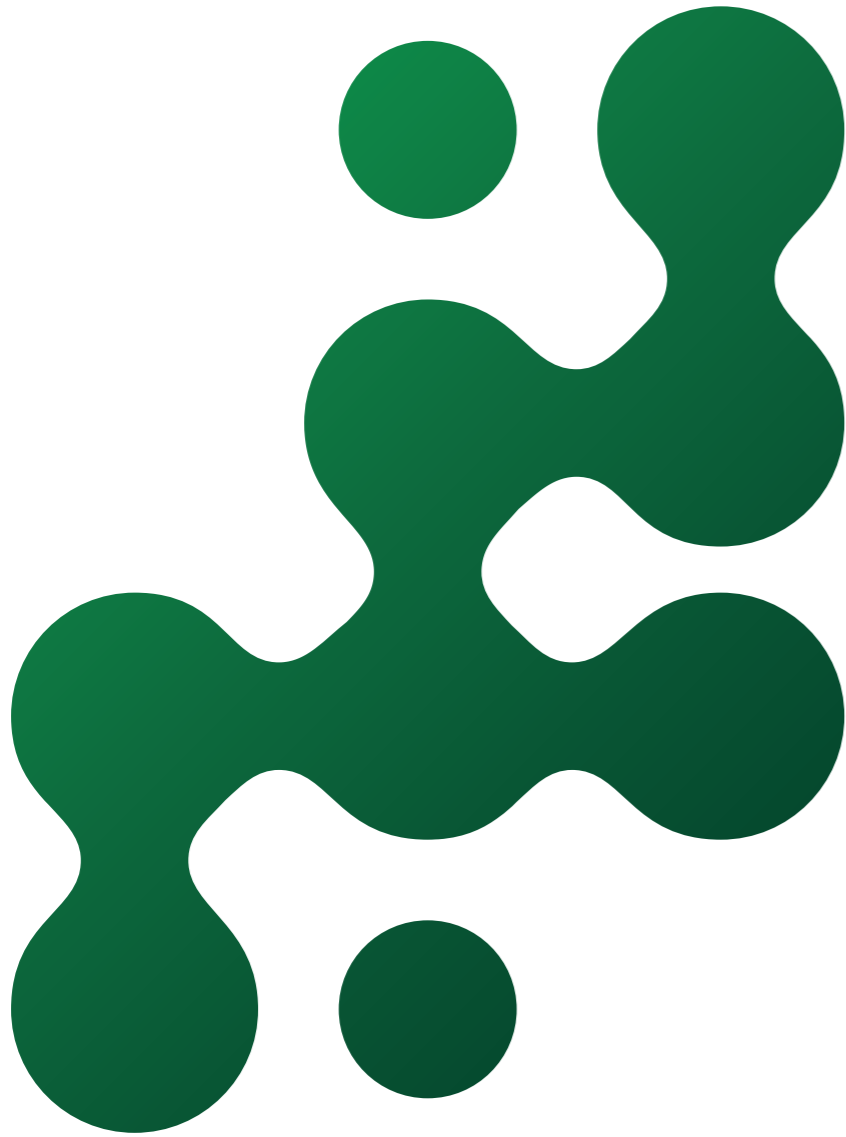
APPLICATION TIP

Shake well before use. Apply during cooler parts of the day to maximise absorption and minimise evaporation. Always perform a compatibility test when mixing with other products. Do not mix with products containing calcium.

Since the product contains organic matter, it is advisable to close the packaging and following storage conditions to prevent mold growth that may occur due to contamination inside the packaging.



Product allowed for use in organic agriculture according to EU Regulation 2018/848. More information can be found on www.inputs.bio.



GROGREEN GROLEAF

Concentrated foliar nutrition
for brilliant results

The **GROLEAF** range is crafted to deliver results through efficient foliar application.

With up to 10 times more chelated micronutrients than standard fertilisers, each formula uniquely combines NPK crop nutrition with the correction of micronutrient deficiencies. Thanks to the QPS45 complex, the products also provide a valuable biostimulant effect for enhanced plant vitality and increased nutrient uptake, resulting in healthier crops, better quality, and higher yields.

THE PRODUCTS:

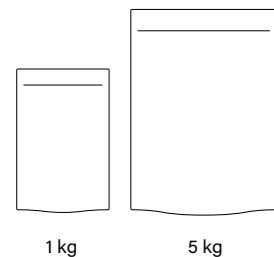
- Sapphire (NPK 10-40-10 + QPS45 +TE)
- Topaz (NPK 30-10-10 + QPS45 +TE)
- Emerald (NPK 20-20-20 + QPS45 +TE)
- Ruby (NPK 5-10-43 + QPS45 +TE)
- Jade (NPK 0-40-40 + QPS45 +TE)



APPLICATION TIPS

Apply during cooler parts of the day (early morning or late afternoon) to maximise absorption and minimise evaporation.

Always perform a compatibility test when mixing with other products. Do not mix with products containing calcium.



THE ADVANTAGES

All-in-one nutritional power

Our formulas feature up to 10 times the concentration of chelated micro-nutrients, allowing you to combine crop nutrition and the correction of multiple deficiencies in a single, effective application.

Powerful biostimulant boost

Fortified with our innovative QPS45 complex, Groleaf enhances overall plant vitality and vigour. This powerful biostimulant action also stimulates the plant's root system, leading to improved nutrient uptake and more efficient growth.

Superior purity for crop safety

Protect your investment with our safe formulas, which are free from chlorine and have a low biuret content. Being fully water-soluble, they ensure a clean application with no residue left on the crop.

Rapid recovery and visible results

Our foliar formulas are absorbed directly through the leaves for a fast and efficient effect, ideal for promoting quick recovery after damaging events like winter stress. This immediate nutrient availability helps crops overcome deficiencies quickly, ensuring you see a swift return to vigorous, healthy growth.

Simplified operations and efficiency

Groleaf is compatible with the majority of agrochemicals, allowing you to easily incorporate it into your tank mix. This flexibility simplifies your spray program, reduces the number of passes through the field, and ultimately saves valuable time and labor costs.

Groleaf: precision NPK for every stage

Every Groleaf blend is engineered around the specific nutrient demands of its target crop. This ensures nutrients are supplied in the right proportions, in the right form, at the right time. For the grower, that means simpler programs, stronger crops, and consistent results.

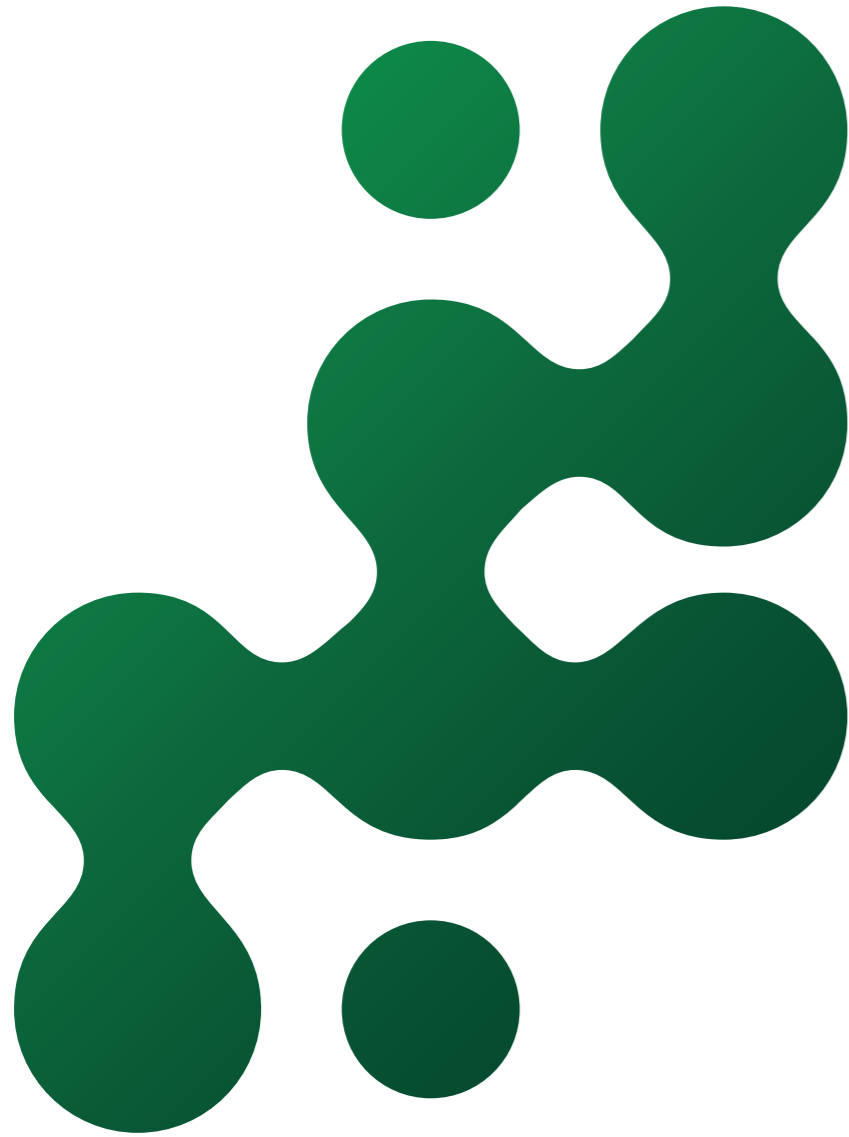
Product	NPK ratio	Primary application focus
Sapphire	10-40-10	A high-phosphorus formula critical for strong root development and successful flower initiation.
Topaz	30-10-10	Ideal for driving peak vegetative growth and promoting quick recovery after winter stress.
Emerald	20-20-20	A balanced formula for steady, healthy growth throughout the main part of the growing season.
Ruby	5-10-43	High in potassium, this formula is essential for maximising fruit growth quality and maturation.
Jade	0-40-40	The essential booster for rapid recovery after transplanting and supporting the late stages of fruit maturation.

Consistent micronutrient delivery

The highly concentrated micronutrient blend incorporated in the Groleaf range remains consistent across every formulation. Ensuring that no matter the growth stage, your crop always receives a vital boost of key chelated elements for rapid recovery and vigorous growth.

The following table details the essential micronutrients delivered by every Groleaf NPK product:

Specifications	W/W
Boron (B), soluble in water	0,049%
Copper (Cu), chelated by EDTA, soluble in water	0,05%
Iron (Fe), chelated by EDTA, soluble in water	0,40%
Manganese (Mn), chelated by EDTA, soluble in water	0,20%
Molybdenum (Mo), soluble in water	0,009%
Zinc (Zn), chelated by EDTA, soluble in water	0,40%
QPS45 complex	2,0%



GROGREEN MICRONUTRIENTS

High-quality micronutrient
solutions

GROGREEN Micronutrients, though required in small amounts, play a critical role in plant metabolism, growth, and crop quality. Deficiencies can quickly limit yield and cause visible disorders. The GROGREEN micronutrient line offers a complete range of chelated solutions that ensure maximum availability and rapid correction, whether through foliar application or fertigation.

THE PRODUCTS:

- GROMIX ME - Multi-element chelated mix for foliar application
- Fe-EDTA 13% - Chelated Iron (for neutral to slightly acidic soils)
- Fe-DTPA 11% - Chelated Iron (for slightly alkaline soils)
- Ferral 6 (EDDHA 4.8%) - High-stability Iron Chelate
- Ferox 6 (EDDHA 3.5%) - Iron Chelate
- Cu-EDTA 15% - Chelated Copper
- Mn-EDTA 13% - Chelated Manganese
- Zn-EDTA 15% - Chelated Zinc



GROGREEN Micronutrients

High-quality single micronutrient solutions

Each of the **GROGREEN Micronutrients** products is formulated for stability, solubility, and safety, helping growers prevent deficiencies before they impact productivity. By targeting single nutrients, growers can fine-tune nutrition programs with precision.

Chelated Copper

- Cu-EDTA 15%

Chelated Iron

- Fe-EDTA 13%
- Fe-DTPA 11%
- Ferral 6% EDDHA (4,8% O-O)
- Ferox 6% EDDHA (3,5% O-O)

Chelated Manganese

- Mn-EDTA 13%

Chelated Zinc

- Zn-EDTA 15%

GROGREEN Gromix ME

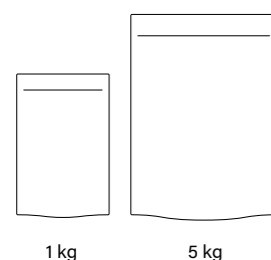
Compound inorganic micronutrient fertiliser

A balanced blend of essential micronutrients designed to prevent and correct combined deficiencies in diverse crops. Particularly useful in intensive systems where multiple deficiencies may occur simultaneously.

pH (1% solution) 5 - 7

Specifications	W/W%
Boron (B), as boric acid, soluble in water	1,30%
Copper (Cu), EDTA chelated, soluble in water	0,28%
Iron (Fe), EDTA chelated, soluble in water	7,50%
Manganese (Mn), EDTA chelated, soluble in water	3,30%
Molybdenum (Mo), as sodium salt, soluble in water	0,24%
Zinc (Zn), EDTA chelated, soluble in water	1,30%
Total micronutrient content, soluble in water	13,92%

pH stability range: 4 - 6,5



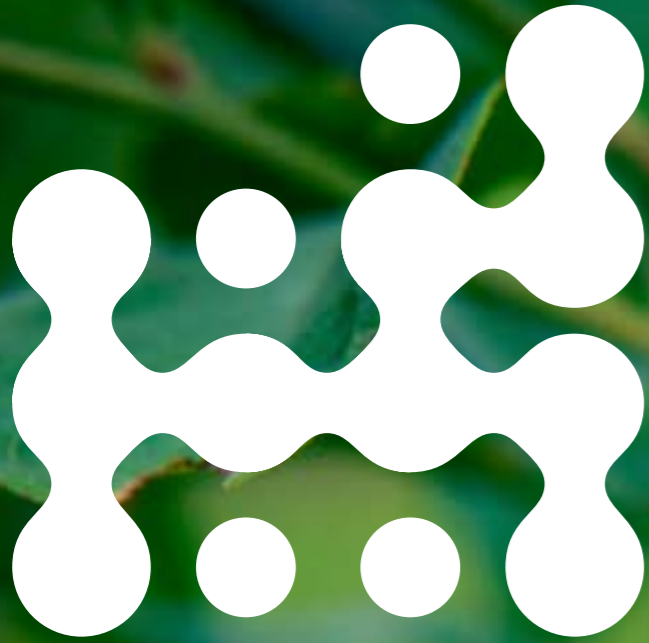
APPLICATION TIPS

Apply during cooler parts of the day (early morning or late afternoon) to maximise absorption and minimise evaporation.

Always perform a compatibility test when mixing with other products.

Fe-EDTA 13%	Chelated Iron (for neutral to slightly acidic soils) Iron is vital for chlorophyll synthesis and photosynthesis. This form provides efficient correction of iron chlorosis in soils up to a neutral pH, restoring healthy green foliage and plant vigour.
Fe-DTPA 11%	Chelated Iron (for slightly alkaline soils) This product is stable at a higher pH than EDTA and is effective even in slightly alkaline conditions. It ensures reliable iron absorption, supports photosynthesis, and prevents leaf yellowing.
Cu-EDTA 15%	Chelated Copper Copper supports enzyme activity, lignin synthesis, and natural disease resistance. Deficiencies often reduce crop resilience and fertility. This product ensures rapid correction, safeguarding both yield and quality.
Mn-EDTA 13%	Chelated Manganese Manganese is crucial for enzyme activation and chlorophyll formation. Deficiencies lead to interveinal chlorosis and reduced vigour. This stable chelated form ensures quick restoration of plant metabolism.
Zn-EDTA 15%	Chelated Zinc Zinc regulates hormone production, internode elongation, and reproductive development. Deficiency leads to stunted growth and poor flowering. Zn-EDTA ensures quick uptake for improved growth and productivity.
Ferral 6% EDDHA (4,8% O-O)	High-stability Iron Chelate (EDDHA) Premium chelated iron with a very high ortho-ortho (o-o) isomer content, providing maximum stability and availability in calcareous and highly alkaline soils. Effective for preventing persistent iron chlorosis.
Ferox 6% (EDDHA 3,5% O-O)	Iron Chelate (EDDHA) High-quality chelated iron with strong stability in alkaline soils. Ensures long-lasting iron supply for sensitive crops like fruit trees, vineyards, and horticultural crops grown in calcareous conditions.





Biotics

Advanced biotechnology for resilient crops and healthy soils

As pioneers in agricultural innovation, we are proud to introduce GROGREEN Biotics. The next step in plant and soil care. This product group leverages cutting-edge biotechnology and beneficial compounds to strengthen plants naturally, improve soil vitality, and prepare crops for the challenges of modern agriculture.

- **A stronger foundation, from the ground up:** biotics work hand in hand with the natural ecosystem of soil and plants. They promote a healthier root environment, stimulate microbial activity, and enhance nutrient cycling. They create the right conditions for long-term crop success.
- **Building natural resistance:** by activating the plant's internal defense pathways and fostering a balanced soil microbiome, Biotics increase resilience against disease, weather extremes, and abiotic stress.
- **The power of advanced biology:** healthier soil structure, stronger root systems, and improved nutrient use efficiency. Biotics unlock the full genetic potential of crops, leading to higher yields and improved quality.
- **Sustainable and forward-thinking:** Biotics provide a science-driven, environmentally responsible solution that contributes to sustainable farming practices and healthier agricultural systems for future generations.

Our Biotics group overview

- **SOIL+:** formulations that restore and improve the physical, chemical, and biological properties of soil, creating an optimal environment for root development and nutrient uptake.
- **HEALTH+:** biostimulants that enhance plant metabolism, growth, and resilience by strengthening natural physiological processes.
- **QUALITY+:** future-oriented innovations designed to improve post-harvest quality, shelf-life, and market value of crops.
- **STRESS+:** advanced solutions that help crops withstand and recover from abiotic stresses such as drought, salinity, and temperature extremes.

SOIL+
Products designed to restore
and optimise soil health



GROGREEN K-Humus 85
Premium organic soil improver rich in humic acids

K-Humus 85 is a concentrated potassium humate designed to restore degraded soils and improve their physical, chemical and biological properties. By enhancing soil aeration, nutrient availability, and microbial activity, it creates ideal conditions for root development and plant growth. Particularly effective in sandy or clay-heavy soils, K-Humus 85 also mitigates the effects of salinity and supports sustainable long-term soil fertility.

Key Advantages

- Improves soil structure, aeration, and water retention.
- Increases cation exchange capacity (CEC), optimising nutrient release and reducing leaching.
- Stimulates microbial life by providing a food source for beneficial organisms.
- Supports higher yields and sustainable soil management.

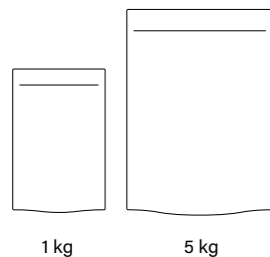
Application Guidelines

- Drip irrigation: 3–6 kg/ha/application, repeat as needed.
- Suitable for sandy, clay-heavy, or degraded soils.

pH: 9 - 10

Specifications	W/W%
Potassium Humates	85%
Total Humic Extract	min. 75%
Humic Acid	min. 60%
Fulvic Acid	min. 10%
Potassium Oxide (K ₂ O), soluble in water	min. 10%
Organic Carbon (C _{org})	35%
Dry matter	95%

EC (1g/litre, 20°C): 1,5 - 2,0 mS/cm



GROGREEN Black Magic
Improve alkaline & saline soil conditions
for maximum yield

Black Magic is an advanced liquid soil conditioner and plant nutrient solution, specifically engineered to restore productivity to challenging alkaline and saline soils. Its multi-action formula works to improve the soil's physical and chemical properties, creating a more favorable root environment and unlocking the full potential of your crops. Applied through irrigation systems it ensures robust plant growth in soils with high pH and salt content. Black Magic can also be used as a seed treatment to improve cereal germination.

Key Advantages

- Unique soil-improving formulation in gel form, fully soluble and easy to use.
- Improves soil structure, aeration, water holding capacity, and drainage.
- Stimulates microbial activity and increases cation exchange capacity for better nutrient uptake.
- Enhances plant performance with stronger roots, improved vigour, and higher yields.
- Effective as a cereal seed treatment to improve germination rates.
- Calcium reduces soil salinity by displacing sodium, creating a healthier root zone.

Application Guidelines

- Drip irrigation: 3–8 kg/ha/application.
- Seed treatment (cereals): 0,3–0,5 kg per 1 t of seed.

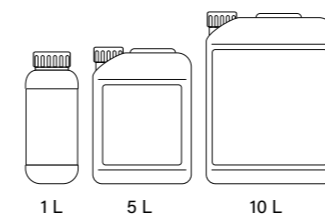
pH: 3,8 Density: +/- 1,50 kg/l

Specifications	W/W	W/V
Total nitrogen (N)	8,40%	12,60%
Ammoniacal Nitrogen (N-NH ₄)	0,60%	0,90%
Nitric nitrogen (N-NO ₃)	7,80%	11,70%
Calcium Oxide (CaO), soluble in water	14,7%	22,1%
Boron (B), as boric acid, soluble in water	0,030%	0,045%
Copper (Cu), chelated by EDTA, soluble in water	0,090%	0,135%
Iron (Fe), chelated by EDTA, soluble in water	0,230%	0,350%
Manganese (Mn), chelated by EDTA, soluble in water	0,133%	0,200%
Molybdenum (Mo), as sodium salt, soluble in water	0,020%	0,030%
Zinc (Zn), chelated by EDTA, soluble in water	0,066%	0,100%
Organic Carbon (Corg)	5,2%	7,8%
Lignosulfonates	13,50%	20,25%
Modified humic acid: 5% - 7,5%		

APPLICATION TIPS

Apply during cooler parts of the day (early morning or late afternoon) to maximise absorption and minimise evaporation.

Always perform a compatibility test when mixing with other products.



HEALTH+

Products that enhance plant vitality and metabolic function



GROGREEN Fusion Sync

Improve your vegetative growth with this organo-mineral NPK-biostimulant



Fusion Sync is a balanced organo-mineral NPK solution enhanced with bio-stimulant effects. Built on Rheon® technology, it delivers complete macronutrient nutrition in a clear, instantly soluble liquid that is easy to apply by drone or sprayer. With its 1:1:1 NPK ratio, Fusion Sync supports balanced vegetative and reproductive growth while reducing the number of sprays required. Its advanced composition ensures safe, efficient nutrition with maximum uptake and minimum application effort.

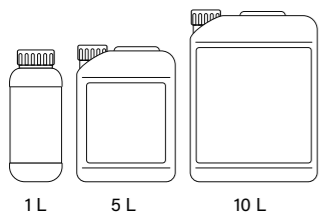
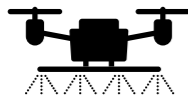
Key Advantages

- Balanced 17-17-17 NPK formula enriched with biostimulant compounds.
- Rheon® technology ensures instant solubility, high concentration, and no residues.
- Developed for drone spraying, but equally effective in conventional foliar application.
- Provides rapid, efficient plant uptake with no risk of phytotoxicity.
- Reduces application frequency while maintaining optimal plant growth.

Application Guidelines

- Foliar application: apply by drone or conventional sprayer. Use during periods of active vegetative and reproductive growth. Safe at high concentrations thanks to Rheon® technology.

Specifications	W/W	W/V
pH: 6 - 8 Density: +/- 1,35 kg/l		
Total nitrogen (N)	12,4%	16,7%
Urea nitrogen (N-NH ₂)	12,4%	16,7%
Total phosphorus pentoxide (P ₂ O ₅)	12,6%	17,0%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	12,6%	17,0%
Phosphorus pentoxide (P ₂ O ₅), soluble in water and neutral ammonium citrate	12,6%	17,0%
Potassium Oxide (K ₂ O), soluble in water	12,6%	17,0%
Boron (B), as boric acid, soluble in water	0,01%	0,013%
Copper (Cu), chelated by EDTA, soluble in water	0,002%	0,003%
Iron (Fe), chelated by EDTA, soluble in water	0,052%	0,007%
Manganese (Mn), chelated by EDTA, soluble in water	0,023%	0,031%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%
Zinc (Zn), chelated by EDTA, soluble in water	0,010%	0,013%



GROGREEN Fertamin

Enhance plant metabolism and increase vigour

Fertamin is a liquid biostimulant designed to strengthen plant metabolism, improve nutrient efficiency, and support overall vitality. Its unique formulation of amino acids, organic acids, and essential nutrients stimulates root development, boosts photosynthesis, and encourages balanced vegetative and reproductive growth. Regular use improves flowering and fruit set, increases crop resilience under stress conditions, and enhances yield potential. Fertamin provides growers with a versatile tool to achieve healthier, more vigorous crops and higher-quality harvests.

Key Advantages

- Stimulates root growth and nutrient uptake by improving bioavailability.
- Boosts photosynthesis and energy production through enhanced chlorophyll synthesis.
- Promotes balanced growth with stronger stems and healthier leaves.
- Improves flowering, pollination, and fruit set for higher yields.
- Helps crops maintain productivity under abiotic stress such as drought, salinity, or temperature extremes.

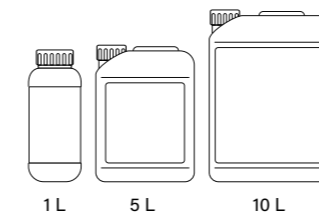
Application Guidelines

- Drip irrigation: 3-5 l/ha/application. For continuous fertigation, 0,5-2 ml/l (0,05-0,2%), standard 1 ml/l.
- Foliar application: 2-4 l/ha/application. Maximum concentration 0,5% (5 ml/l).

APPLICATION TIPS

Apply during cooler parts of the day (early morning or late afternoon) to maximise absorption and minimise evaporation.

Always perform a compatibility test when mixing with other products.



Specifications	W/W	W/V
pH: 2 - 3 Density: +/- 1,27 kg/l		
Total nitrogen (N)	7,0%	8,9%
Organic nitrogen (N-org), from amino acids	2,1%	2,7%
Urea nitrogen (N-NH ₂)	4,9%	6,2%
Total Phosphorus pentoxide (P ₂ O ₅)	15,3%	19,4%
Phosphorus pentoxide (P ₂ O ₅), soluble in water	15,3%	19,4%
Phosphorus pentoxide (P ₂ O ₅) soluble in neutral ammonium citrate	15,3%	19,4%
Potassium Oxide (K ₂ O), soluble in water	4,8%	6,1%
Free amino acids	10,0%	12,7%
Organic acids	3,5%	4,5%
Organic Carbon	9,3%	11,8%
Boron (B), as ethanolamine salt, soluble in water	0,023%	0,029%
Copper (Cu), chelated by EDTA, soluble in water	0,002%	0,003%
Iron (Fe), chelated by EDTA, soluble in water	0,052%	0,066%
Manganese (Mn), chelated by EDTA, soluble in water	0,023%	0,029%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%
Zinc (Zn), chelated by EDTA, soluble in water	0,009%	0,011%

QUALITY+

Products designed to enhance crop quality attributes



GROGREEN Fusion C-RealS

Increase protein content in cereals with this NPK-biostimulant



Fusion C-RealS is a premium organo-mineral foliar fertiliser with biostimulant effect developed using our patented Rheon® technology. It offers unmatched solubility and safety, enabling direct application without dissolution. This innovation allows for drone spraying or conventional foliar spraying, making it ideal for modern precision agriculture. With its high concentration of nitrogen and sulfur, Fusion C-RealS is the perfect solution for increasing the protein content of cereals while minimising the risk of leaf burn.

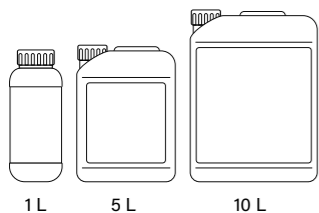
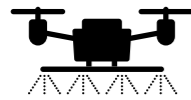
Key Advantages

- Developed with Rheon® technology, providing a completely clear, instantly soluble liquid.
- Proven quality increase of your cereals by maximising protein content.
- Suitable for drone application, enabling highly efficient precision spraying.
- High concentration allows fewer sprays while maintaining crop safety.
- Provides both macronutrients and biostimulant compounds in one solution.
- Saves time and labour by eliminating the need for pre-dissolution.

Application Guidelines

- Foliar application: apply by drone or conventional sprayer. Use according to crop stage and nutrient demand. Safe to apply undiluted or in highly concentrated solutions thanks to Rheon® stability.

Specifications	W/W	W/V
pH: 6 - 8 Density: +/- 1,33 kg/l		
Total nitrogen (N)	20,0%	26,6%
Organic nitrogen (N-org)	6,0%	8,0%
Urea nitrogen (N-NH ₂)	14,0%	18,6%
Sulphur Trioxide (SO ₃), soluble in water	9,6%	12,8%
Organic Carbon	24,5%	32,6%
Dry matter	88%	
Boron (B), as boric acid, soluble in water	0,010%	0,013%
Copper (Cu), chelated by EDTA, soluble in water	0,002%	0,003%
Iron (Fe), chelated by EDTA, soluble in water	0,059%	0,078%
Manganese (Mn), chelated by EDTA, soluble in water	0,127%	0,168%
Molybdenum (Mo), as sodium salt, soluble in water	0,002%	0,003%
Zinc (Zn), chelated by EDTA, soluble in water	0,396%	0,527%



STRESS+

Products that improve resilience against abiotic stresses



GROGREEN Releaf Omni

Support crop resilience against abiotic stress

Releaf Omni is an advanced gel biostimulant specifically developed to help crops withstand and recover from abiotic stresses such as drought, salinity, and temperature extremes. Its balanced composition of amino acids, seaweed extracts, and organic compounds strengthens roots, enhances water retention, and activates the plant's natural defense pathways. With regular use, crops recover faster after stress events, maintain higher productivity, and deliver improved harvest quality even under challenging conditions.

Key Advantages

- Protects crops during drought, salinity, or heat by improving water-holding capacity and cell strength.
- Activates natural defense pathways, increasing plant resilience to environmental stress.
- Accelerates recovery with amino acids that repair stress-related damage.
- Stimulates root growth, improving water and nutrient uptake.
- Enhances overall plant metabolism for balanced growth and better yield quality.

Application Guidelines

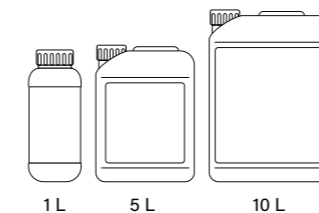
- Drip irrigation: 3-5 l/ha/application. For continuous fertigation, 0,5-2 ml/l (0,05-0,2%), standard 1 ml/l.
- Foliar application: 2-4 l/ha/application, applied at least twice. Maximum concentration 0,5% (5 ml/l).

APPLICATION TIPS

Apply during cooler parts of the day (early morning or late afternoon) to maximise absorption and minimise evaporation.

Always perform a compatibility test when mixing with other products.

Specifications	W/W	W/V
pH: 7 - 8 Density: +/- 1,18 kg/l		
Total nitrogen (N)	5,0%	5,90%
Organic nitrogen (N-org), from amino acids	4,0%	4,72%
Urea nitrogen (N-NH ₂)	1,0%	1,18%
Total Potassium Oxide (K ₂ O)	6,5%	7,7%
Potassium Oxide (K ₂ O), soluble in water	6,5%	7,7%
Organic Carbon	17,5%	20,65%
Seaweed extract	18,0%	21,2%
Osmoprotector	6,3%	7,4%
Free amino acids	17,0%	20,0%
Organic acids	2,0%	2,4%



Technical guidelines

Storage recommendations

General Principles

The following general principles apply to all products:

- **First-In, First-Out (FIFO):** strict stock rotation is necessary to prevent product expiration.
- **Palletisation:** never store products directly on the floor to prevent moisture migration and facilitate cleaning.
- **Ventilation:** warehouses must be well-ventilated to prevent heat accumulation and condensation.

Crystalline Water-Soluble Powders (WSF)

GROGREEN Tailor made NPK, GROGREEN Groleaf, GROGREEN Micronutrients.

Humidity and Moisture Control

Most soluble powders are hygroscopic (they absorb moisture from the air).

- **Relative Humidity (RH):** store in an environment with RH <65%. High humidity causes caking, clumping, and liquefaction.
- **Packaging Integrity:** bags must remain tightly sealed. If a bag is opened, it must be resealed immediately using heat sealing or airtight clamps.
- **Condensation:** avoid rapid temperature changes which can cause condensation inside the plastic wrapping.

Temperature

- **Range:** ideal storage is between 5°C and 30°C.
- **Heat Risks:** excessive heat (>35°C) can cause certain salts (e.g., urea phosphates, calcium nitrate) to react/melt or can cause degradation of chelating agents (EDTA/DTPA).
- **Cold Risks:** generally resistant to cold.

Stacking and Physical Pressure

Try to avoid high stacking of pallets as pressure buildup on the bottom layer can increase chances of clumping/caking.

Liquid Fertilizers

GROGREEN Fusion

Temperature and Crystallization

- **Low Temperature (Salting Out):**
 - » Ideal temperature range between 10 - 25°C.
 - » Liquids have a specific saturation point. If temperatures drop below the "Salt Out Temperature" (SOT)—often around 0°C to 5°C depending on concentration—crystals will precipitate out of the solution.
 - » Protocol: Store in frost-free areas. If freezing occurs, the product must be gently warmed and agitated to redissolve crystals before use.
- **High Temperature:**
 - » Avoid temperatures >35°C to prevent expansion of liquid (risk of container deformation/bursting) and evaporation if seals are imperfect.

Light Exposure

- **UV Protection:** store out of reach of direct sunlight.
- **Algae Growth:** clear IBCs or tanks exposed to sunlight promote algae growth if nitrogen/phosphorus is present.
- **Chelate Degradation:** iron chelates (specifically Fe-EDTA and Fe-DTPA) are highly sensitive to photodegradation and will become ineffective if exposed to direct sunlight.

Gel Suspension Fertilizers

GROGREEN Gel fertilizers behave as Non-Newtonian fluids. Their stability relies on a delicate balance of viscosity modifiers holding high-density particles in suspension.

Temperature Sensitivity

Temperature fluctuations are the primary cause of reduced stability and quality of GROGREEN gel technology products. Ideal storage temperature of 10 - 25°C.

High Temperature Risks:

- » **Viscosity Drop:** as temperature rises, the viscosity of the continuous phase decreases. Lower viscosity increases the sedimentation rate of suspended particles.
- » **Separation:** high heat causes the gel network to contract, squeezing out the liquid phase. This results in a layer of clear liquid on top and dense "sludge" at the bottom. This is however reversible after agitation (shaking/stirring).
- » **Permanent Damage:** Prolonged exposure to >40°C can permanently degrade the polymer chains (thixotropic agents), meaning the gel will never recover its structure even if cooled.

Low Temperature Risks:

- » **Matrix Collapse:** freezing causes water crystals to form, which physically cut the polymer network holding the fertilizer in suspension. This could result in a reduced stability of the gel suspension, resulting in a separation into a liquid and solid layer.

Mixture with Agrochemicals in the tank

Water pH is a critical factor in the effectiveness of many plant protection products and growth regulators. Under alkaline conditions, hydrolysis occurs degrading the pesticide to inactive forms. The degradation of a pesticide can be measured in terms of its half-life (reduction of the active ingredient content by 50%). As a general rule, herbicides, insecticides, and fungicides perform best in slightly acidic water, pH 4–6,5. The pH of the solution can influence how long a pesticide molecule remains intact, its stability and effectiveness. Buffering agents prevent pesticide hydrolysis during mixing in the tank. Foliar gel can be used as a buffering agent to preserve the stability and enhance the efficacy of plant protection products and growth regulators in hard water conditions due to the acidic pH.

Apparent Solidification of Gel Products

Upon opening the container, high-density gel fertilizers such as GROGREEN Gel may appear to be semi-solid, immobile, or "frozen" in a gelatinous block. To the observer, the product may seemingly lack the fluid properties required for pouring or dosing. This appearance is a normal characteristic of high-quality suspension concentrates and does not indicate product expiration or spoilage.

The Science:

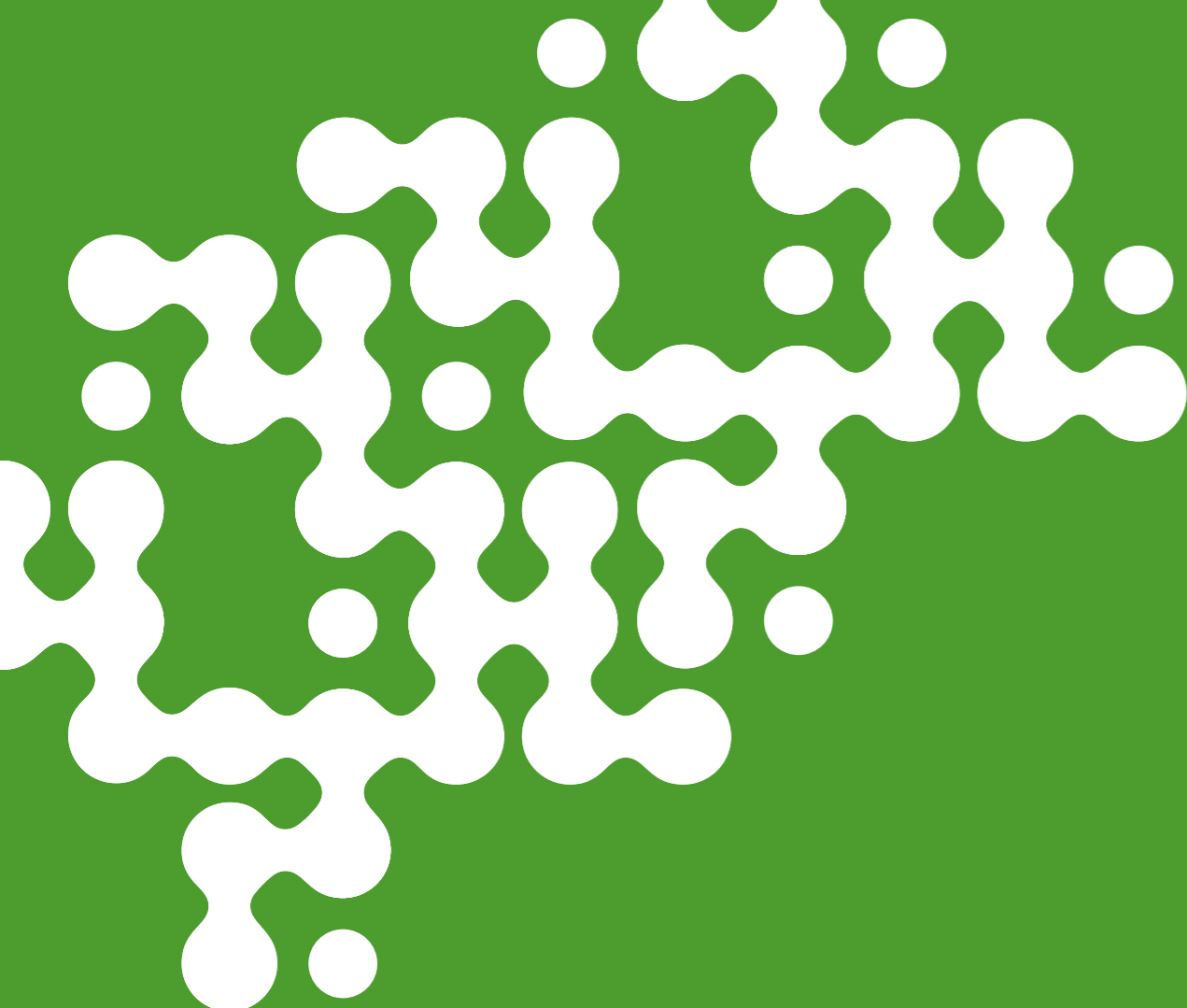
This physical state is the result of thixotropy, a specific rheological property engineered into the formulation. These products are dense suspensions containing high concentrations of salts. To prevent these heavy particles from sedimenting (sinking) and forming a hard cake at the bottom of the drum during storage, the formulation utilizes a thixotropic matrix.

- **Static State:** When at rest, the product builds an internal structural network with high "yield stress." This high viscosity locks particles in place, effectively fighting gravity. This is why the product appears solid during storage.
- **Dynamic State:** Thixotropic fluids are "shear-thinning." The internal structure is held together by weak bonds that are easily broken by kinetic energy.

The Solution:

Because the "solid" state is reversible, the product can be easily transformed back into a free-flowing liquid through mechanical shear.

- **Action:** By vigorously shaking the container, stirring, or recirculating the product (applying shear stress), you disrupt the internal static network.
- **Result:** The viscosity drops immediately, and the product transitions into a low-viscosity liquid.
- **Application:** Once agitated, the product flows freely and allows for precise volumetric dosing. If left undisturbed, the product will slowly rebuild its structure to regain stability.



Naturally different



Doelhaagstraat 77/1
2840, Rumst
Belgium
E-mail: info@lima-europe.eu

www.grogreen.pro
www.lima-europe.com



grogreen.pro

