

PRODUCT CATALOGUE

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ABOUT

Lima Europe is a global supplier of specialty plant nutrition products. The story of Lima started in Belgium in 1999. Since then the company developed to a global player based on its core competence in specialty fertilizer technology, building itself and its famous GROGREEN brand a reputation of quality and reliability.

GLOBAL PRESENCE

We have a presence in all regions in which soluble fertilizers contribute to saving water and increasing yields. Our wide geographical coverage enables us to identify and respond swiftly to new trends and opportunities. Wherever we are active, we seek to integrate our operations seamlessly with the local agricultural practices. We always make it a priority to develop good relations with local business partners.

MISSION

Implement our technological lead to create innovative products that work in the fields of our farmers. Safeguard the future of our company through sustainable profitable growth.

BELIEFS

We derive our strength as a company from the lasting relationships we build with our customers, suppliers and other business partners, with a clear focus on creating win-win solutions. Continuously meeting customer expectations is the foundation of our growth. Our focus on innovation and our relentless pursuit of operational excellence give us a competitive advantage. Lima Europe is committed to continuing research and development in order to offer farmers the most effective products on the market.





DRIP IRRIGATION

Drip irrigation is the most efficient method of providing all nutrients to the root system of the crop. Our powder fertilizers cover all crop needs with standard formulations as well as specifically designed formulations for different situations during the crop development.

Next to the powders, we have developed the GROGREEN FIVE product line which is a fully water soluble product line in gel form. They combine the 5 major nutrients for plant development (nitrogen, phosphorus, potassium, calcium and magnesium) with trace elements in a fully water soluble form without any risk of clogging the drippers.

1.1

POWDER NPK

TAILOR-MADE NPK

Optimized for the crops and local conditions

These formulas are designed to meet the specific needs of your crops. Our water soluble formulations, with high quality European raw materials, ensure a healthy growth and high yields.





Packing size 10 kg, 25 kg PP/PE

Starter	Vegetative	Balanced	Fruit development
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 + 1 MgO + TE	5-10-43 + TE
12-42-12 + TE	28-10-10 + 2 MgO + TE	18-18-18 + 2 MgO + TE	10-5-40 + 2 MgO + TE
15-30-15 + 2 MgO + TE	25-10-10 + TE	17-17-17 + 3 MgO + TE	15-5-30 + 3 MgO + TE

All formulas physically possible to blend can be supplied

Recommendations

For continuous feeding, use from 0.5 - 2 grams per L of water. Standard dosage is around 1 gram per liter.

GRINTA NPK

Crop specific fertilizers for soil grown crops

Guaranteeing the availability of all nutrients in the correct proportions and providing a considerable advantage in usage. Every formula is fine-tuned to the nutrient requirements of its specific target crop.





Packing size
10 kg, 25 kg PP/PE

	Tomato Pepper	melon Cucumber	Roses Carnation
	SOLA	CURBI	ROCA
	14-10-26	17-8-22	17-8-20
Content:			
Total Nitrogen (N)	14	17	17
Nitric Nitrogen (N-NO ₃)	8.9	10.4	9.6
Ammoniacal Nitrogen (N-NH ₄)	5.1	6.6	7.4
Total Phosphorus Pentoxide (P ₂ O ₅)	10	8	8
Phosphorus Pentoxide (P ₂ O ₅), soluble in water	10	8	8
Phosphorus Pentoxide (P ₂ O ₅), soluble in neutral ammonium citrate	10	8	8
Potassium Oxide (K ₂ O), soluble in water	26	22	20
Magnesium Oxide (MgO), soluble in water	3	3	3
Boron (B), soluble in water	0.025	0.025	0.04
Copper (Cu), EDTA-chelated, soluble in water	0.01	0.005	0.01
Iron (Fe), EDTA-chelated, soluble in water	0.08	0.09	0.09
Manganese (Mn), EDTA-chelated, soluble in water	0.045	0.05	0.03
Molybdenum (Mo), soluble in water	0.004	0.004	0.006
Zinc (Zn), EDTA-chelated, soluble in water	0.025	0.02	0.03

${\bf Recommendations}$

For continuous feeding, use 0.5 – 2 grams per L of water. Standard dosage is around 1 gram per liter.

SUBTIL NPK

Crop specific fertilizers for hydroponics

Offering a convenient solution for fertilizing substrate grown crops. Our formulations are appropriate for a wide variety of water qualities and growth stages, without deviating from the optimal nutrient solutions.

GROGREEN Subtil can be applied using various fertilizer dosage systems, starting from a simple tank with a volumetric dosing pump to full automatic AB-units.



Packing size

10 kg, 25 kg PP/PE

	Tomato/Pepper	Cucumber/Melon
	SOLA	CURBI
	7-11-37	9-11-35
Content:	%	%
Total Nitrogen (N)	7.4	9.4
Nitric Nitrogen (N-NO $_3$)	7.3	8.7
Ammoniacal Nitrogen (N-NH $_4$)	O.1	0.7
Total Phosphorus Pentoxide (P ₂ O ₅)	11.3	11.1
Phosphorus Pentoxide (P_2O_5), soluble in water	11.3	11.1
Phosphorus Pentoxide (${\rm P_2O_5}$), soluble in neutral ammonium citrate	11.3	11.1
Potassium Oxide (K ₂ O), soluble in water	37.5	35.4
Magnesium Oxide (MgO), soluble in water	3.0	3.2
Boron (B), soluble in water:	0.04	0.04
Copper (Cu) EDTA-chelated, soluble in water	0.008	0.008
Iron (Fe), EDTA-chelated, soluble in water	0.19	0.19
Manganese (Mn) EDTA-chelated, soluble in water	0.085	0.085
Molybdenum (Mo), soluble in water	0.008	0.008
Zinc (Zn), EDTA-chelated, soluble in water	0.035	0.035

Recommendations

For continuous feeding, use 0.5 - 2 grams per L of water. Standard dosage is around 1 gram per liter.



1.2

GEL FIVE N+P+K+Ca+Mg+TE

The GROGREEN FIVE product line is the first of its kind, combining high levels of NPK with calcium, magnesium and all needed trace elements.

A state of the art solution for drip irrigation, combining 3 different applications in one: supply of the macronutrients NPK, supply of calcium and magnesium, and acidification of the soil.

Providing acidity to neutralize and dissolve bicarbonates, avoiding clogging of drippers and releasing unattainable nutrients for the plant. The unique composition makes it the number one solution for soils that suffer from alkalinity and salinity.

FIVE TERRA

12-44-12 + 6 CaO + 3 MgO +TE

High Phosphorus formulation

Best suited for applications during root development (tuber initiation in potato, after transplanting vegetables, beginning of root activity of fruit trees), during tillering of wheat and during flower initiation.



Packing size 200 g, 1 kg, 5 kg

	Density: +/	- 1,60 kg/liter
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 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), 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	0.020 %	0.032 %
Molybdenum (Mo), soluble in water	0.002 %	0.003 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.016 %

Recommendations

FIVE TERRA is a single-tank mix GEL providing plants with all the necessary nutrients.

FIVE TERRA can be mixed with calcium nitrate without the risk of precipitation.

Do not mix with other NPK, phosphate and/or sulphate containing fertilizers.

When mixing with other chemicals, it is recommended to perform small scale trials before using on a large scale. <u>Fertigation</u>:

The recommended concentration of GROGREEN GEL FIVE TERRA in feed solutions varies from 0.5 to 2 g/l (0.05 – 0.2%). The high phosphorus formulation is best suited for root development (tuber initiation in potato, after transplanting vegetables, beginning root activity of fruit trees), during tillering of wheat and during flower initiation. Foliar spray:

Although the product is mainly used for fertigation, it is also possible to use it as a foliar spray. Apply 2 – 4 kg/ha/application. Use in sufficient water volume to guarantee full coverage of the foliage.

FIVE MULTI

20-20-20 + 6 CaO + 3 MgO +TE

Balanced formulation

Best suited for applications during vegetative crop development.



Packing size 200 g, 1 kg, 5 kg

	Density: +/- 1,55 kg/l	
Specifications	W/W	W/V
Total Nitrogen (N)	13.20 %	20.0 %
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 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), 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	0.020 %	0.032 %
Molybdenum (Mo), soluble in water	0.002 %	0.003 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.016 %

Recommendations

 ${\sf FIVE\ MULTI}\ is\ a\ single-tank\ mix\ {\sf GEL}\ providing\ plants\ with\ all\ the\ necessary\ nutrients.$

FIVE MULTI can be mixed with calcium nitrate without the risk of precipitation.

Do not mix with other NPK, phosphate and/or sulphate containing fertilizers.

When mixing with other chemicals, it is recommended to perform small scale trials before using on a large scale.

Fertigation:

The recommended concentration of GROGREEN GEL FIVE MULTI in feed solutions varies from 0.5 to 2 g/l (0.05 - 0.2%). The balanced formulation is best suited for applications during vegetative crop development.

Foliar spray:

Although the product is mainly used for fertigation, it is also possible to use it as a foliar spray. Apply 2 - 4 kg/ha/application. Use in sufficient water volume to guarantee full coverage of the foliage.

FIVE FRUCTUS

18-9-36 + 6 CaO + 3 MgO +TE

High Potassium formulation

Best suited for applications during fruit growth and maturation when potassium is the most important nutrient.



Packing size 200 g, 1 kg, 5 kg

	Density: +/	- 1,60 kg/liter
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_2O_5), soluble in water	5.70 %	9.00 %
Phosphorus Pentoxide (P ₂ O ₅), soluble in 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 %	3.10 %
Boron (B), 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	0.020 %	0.032 %
Molybdenum (Mo), soluble in water	0.002 %	0.003 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.016 %

Recommendations

FIVE FRUCTUS is a single-tank mix GEL providing plants with all the necessary nutrients.

FIVE FRUCTUS can be mixed with calcium nitrate without the risk of precipitation.

Do not mix with other NPK, phosphate and/or sulphate containing fertilizers.

When mixing with other chemicals, it is recommended to perform small scale trials before using on a large scale.

Fertigation:

The recommended concentration of GROGREEN GEL FIVE FRUCTUS in feed solutions varies from 0.5 to 2 g/l (0.05 - 0.2%). The high potassium formulation is best suited for applications during fruit growth and maturation.

Foliar spray:

Although the product is mainly used for fertigation, it is also possible to use it as a foliar spray.

Apply 2 - 4 kg/ha/application. Use in sufficient water volume to guarantee full coverage of the foliage.





FOLIAR

Foliar feeding provides fast, on-the-spot nutrition to ensure high, top quality yields. It serves as an effective supplementary feeding to complete soil fertilization and for prompt correction of nutrient deficiencies. Foliar application of nutrients at specific stages of crop development boosts yield and improves quality.

Complementary nutrition:

Foliar application of nutrients complements soil application and fertigation when root uptake is disturbed, when soil fertilization is inadequate or when nutrients with restricted mobility in the phloem are applied.

Corrective nutrition:

Foliar uptake of nutrients is much faster than root uptake. Therefore foliar fertilization is the method of choice when deficiency symptoms are observed and prompt correction is required. Nutrients are rapidly absorbed through the foliage, providing the plant with the missing nutrients and strengthening it.

Specific growth stages:

Plants require different amounts of nutrients in different growth stages. It is sometimes difficult to control the nutrient balance in the soil. Foliar applications of essential nutrients during key stages can improve yield and quality.

2.1

SPECIALISED POWDER NPK

GROLEAF NPK

This high concentration of chelated micronutrients allows us to combine crop nutrition and correction of micronutrient deficiencies all in one go. As such, GROLEAF formulas become unique multipurpose foliar nutrition products. In addition, our products provide valuable inputs, such as a biostimulant effect in plants.

The formulations are specifically designed for foliar application guaranteeing an optimal and prompt nutrient uptake through leaves, which is more efficient and faster than root uptake. There are several formulations to be applied at different crop stages.



	10-40-10	30-10-10	20-20-20	5-10-43	0-40-40
Specifications	W/W	W/W	W/W	W/W	W/W
Total Nitrogen (N)	10.00 %	30.00 %	20.00 %	5.00 %	0
Nitric Nitrogen (N-NO $_3$)	2.75 %	0.30 %	0.30 %	5.00 %	-
Ammoniacal Nitrogen (N-NH ₄)	7.25 %	-	-	-	-
Urea Nitrogen (N-NH ₂)	-	29.70 %	19.70 %	-	-
Total Phosphorus Pentoxide (P ₂ O ₅)	40.00 %	10.00 %	20.00 %	10.00 %	40.00 %
Phosphorus Pentoxide (P_2O_5), soluble in water	40.00 %	10.00 %	20.00 %	10.00 %	40.00 %
Phosphorus Pentoxide (P_2O_5), soluble in neutral ammonium citrate	40.00 %	10.00 %	20.00 %	10.00 %	40.00 %
Potassium oxide (K ₂ O), soluble in water	10.00 %	10.00 %	20.00 %	43.00 %	40.00 %
Boron (B), soluble in water	0.049 %	0.049 %	0.049 %	0.049 %	0.049 %
Copper (Cu), EDTA-chelated, soluble in water	0.05 %	0.05 %	0.05 %	0.05 %	0.05 %
Iron (Fe), EDTA-chelated, soluble in water	0.40 %	0.40 %	0.40 %	0.40 %	0.40 %
Manganese (Mn), EDTA-chelated, soluble in water	0.20 %	0.20 %	0.20 %	0.20 %	0.20 %
Molybdenum (Mo), soluble in water	0.009 %	0.009 %	0.009 %	0.009 %	0.009 %
Zinc (Zn), EDTA-chelated, soluble in water	0.4 %	0.4 %	0.4 %	0.4 %	0.4 %
QPS45 complex	1.0 %	1.0 %	1.0 %	1.0 %	1.0 %
Lignosulfonates	1.0 %	1.0 %	1.0 %	1.0 %	1.0 %

Recommendations

Cereals: apply 2 - 4 kg/ha/application **Alfalfa:** apply 2 - 4 kg/ha/application **Potato:** apply 5 kg/ha/application

Onion, lettuce, etc...: apply 4 kg/ha/application Greenhouse vegetables: apply 0.5 - 1 kg/ha/application Open field vegetables: apply 2 - 4 kg/ha/application

Small fruits: apply 2 - 4 kg/ha/application **Fruit trees:** apply 3 - 5 kg/ha/application

For grapes, the applications start before flowering on new shoots with 2 - 4 kg/ha/application. Continue with 3 - 5 kg/ha/application.

NB: The foliar dosage rate varies from 0.5 - 5 kg/ha with a maximum concentration of 0.5% (or 500 g/100 L water).



GEL NPK

For more than 10 years, GROGREEN GEL has been present in the market. With it's very high concentration, low pH and added adjuvants, this is the perfect product line to use <u>for foliar feeding of your crop</u>.

It can be combined with plant protection products and enhances their efficiency because of pH buffering capacities in hard water conditions.

The advantages of both powder and liquid fertilizers is combined in these products, combining the high concentration of powders with the useful (liquid) additives used in liquid formulations.

The additives in these foliar gels reduce the surface tension of the spray solution on the leaves and will increase water retention to make sure that the uptake efficiency of the plants is increased.

STARTER

16-69-16 +TE

High Phosphorus formulation

Developed for use during stages of significant P uptake such as after transplanting, during root development, before flowering and fruit set.



Packing size 200 g, 1 kg, 5 kg

	5/	1041 /1
		- 1.64 kg/liter
Specifications	W/W	W/V
Total Nitrogen (N)	9.70 %	16.00 %
Ammoniacal Nitrogen (N-NH ₄)	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_2O_5), soluble in water	42.00 %	69.00 %
Phosphorus Pentoxide (P_2O_5), soluble in neutral ammonium citrate	42.00 %	69.00 %
Potassium Oxide (K ₂ O), soluble in water	9.70 %	16.00 %
Boron (B), 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), soluble in water	0.002 %	0.003 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.016 %

Recommendations

Fertigation:

Single application: apply 3 - 10 kg/ha/application, timing and dosage depending on the crop involved. Continuous fertigation: 0.3 - 1.5 g/l, standard for most cropping conditions is 1 g/l of water.

Foliar spray:

DLIAR - GEL NPK

VEGETATIVE

27-27-27 + 3 MgO + TE

Balanced, multi-purpose formulation

Can be used throughout the entire crop growth cycle. It is particularly suitable to provide the required nutrients during the early stages of crop development where nitrogen is needed.



Packing size 200 g, 1 kg, 5 kg

	Density: +/- 1.63 kg/lite	
Specifications	W/W	W/V
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_2O_5)	16.60 %	27.00 %
Phosphorus Pentoxide (P ₂ O ₅), soluble in water	16.60 %	27.00 %
Phosphorus Pentoxide (P_2O_5), soluble in 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), 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 %	0.081 %
Manganese (Mn), EDTA-chelated, soluble in water	0.025 %	0.040 %
Molybdenum (Mo), soluble in water	0.002 %	0.003 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.016 %

Recommendations

Fertigation:

Single application: apply 3 - 10 kg/ha/application, timing and dosage depending on the crop involved. Continuous fertigation: 0.3 - 1.5 g/l, standard for most cropping conditions is 1 g/l of water.

Foliar spray

CALCIPHOS

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

High Phosporus & Calcium formulation

Designed for critical stages that require phosphorus and calcium such as tuber initiation in potato, lodging prevention in wheat or flower preparation and fruit maturation in fruit trees. It will also increase the integrity of the cell walls to increase the resistance against pests.



Packing size 200 g, 1 kg, 5 kg

	Density: +/	'- 1.63 kg/liter
Specifications	W/W	W/V
Total Nitrogen (N)	5.50 %	9.00 %
Nitric Nitrogen (N-NO₃)	0.50 %	0.80 %
Urea Nitrogen (N-NH2)	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_2O_5), soluble in 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), soluble in water	0.11 %	0.18 %
Zinc (Zn), EDTA-chelated, soluble in water	0.34 %	0.56 %

Recommendations

Fertigation:

Single application: apply 3 - 10 kg/ha/application, timing and dosage depending on the crop involved. Continuous fertigation: 0.3 - 1.5 g/l, standard for most cropping conditions is 1 g/l of water.

Foliar spray:

LIAR - GEL NPK

FRUIT18-11-59 + 2 MgO + TE

High Potassium formulation

To promote ripening, enhance colour, increase sugar content and hardness, and improve yield and crop quality.



Packing size 200 g, 1 kg, 5 kg

Specifications	Density: +/	- 1.80 kg/liter 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 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), 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), soluble in water	0.002 %	0.004 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.018 %

Recommendations

Fertigation:

Single application: apply 3 - 10 kg/ha/application, timing and dosage depending on the crop involved. Continuous fertigation: 0.3 - 1.5 g/l, standard for most cropping conditions is 1 g/l of water.

Foliar spray:

P-K-S

 $7.7-47.4-44.3 + 3.2 \text{ CaO} + 13.7 \text{ SO}_3 + \text{TE}$



Designed as a 'finisher' to increase the fruit quality (coloring, BRIX level and storage). This specific combination is also suited to activate root development after transplanting or after germination. It will also have a positive effect on the flowering rate.



Patented technology

Packing size 200 g, 1 kg, 5 kg

	Density:	+/- 1.75 kg/liter
Specifications	W/W	W/V
Total Nitrogen (N)	4.4 %	7.70 %
Nitric Nitrogen (N-NO ₃)	2.60 %	4.55 %
Ammoniacal Nitrogen (N-NH $_{\scriptscriptstyle 4}$)	0.40 %	0.70 %
Urea Nitrogen (N-NH₂)	1.40 %	2.45 %
Total Phosphorus Pentoxide (P_2O_5)	27.10 %	47.40 %
Phosphorus Pentoxide (P ₂ O ₅), soluble in water	27.10 %	47.40 %
Phosphorus Pentoxide ($\mathrm{P_2O_5}$), soluble in neutral ammonium citrate	27.10 %	47.40 %
Potassium Oxide (K ₂ O), soluble in water	25.40 %	44.3 %
Calcium Oxide (CaO), soluble in water	1.80 %	3.20 %
Sulphur Trioxide (SO ₃), soluble in water	7.80 %	13.7 %
Boron (B), 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 %	0.088 %
Manganese (Mn), EDTA-chelated, soluble in water	0.025 %	0.040 %
Molybdenum (Mo), soluble in water	0.002 %	0.004 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.018 %

Recommendations

Fertigation (after transplanting/sowing):

Single application: apply 3 - 10 kg/ha/application, timing and dosage depends on the crop involved. Continuous fertigation: 0.3 - 1.5 g/l, standard for most cropping conditions is 1g/l.

Foliar spray (flowering and fruit development):

BRASSICA

 $9-9-39 + 6.6 \text{ MgO} + 53.9 \text{ SO}_3 + \text{TE}$

Specifically designed for Brassicaceae

With its main components being potassium, magnesium and sulfur, it is also suited for usage during the fruit growth and maturation stages of horticultural and agricultural crops.



Packing size 200 g, 1 kg, 5 kg

	Density: +/	- 1.75 kg/liter
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_2O_5), soluble in neutral ammonium citrate	5.40 %	9.45 %
Potassium Oxide (K ₂ O), soluble in water	22.00 %	39.00 %
Magnesium Oxide (MgO), soluble in water	3.80 %	6.60 %
Sulphur Trioxide (SO ₃), soluble in water	30.80 %	53.90 %
Boron (B), 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), soluble in water	0.002 %	0.003 %
Zinc (Zn), EDTA-chelated, soluble in water	0.010 %	0.017 %

Recommendations

Fertigation:

Single application: apply $3 - 10 \, \text{kg/ha/application}$, timing and dosage depending on the crop involved. Continuous fertigation: $0.3 - 1.5 \, \text{g/l}$, standard for most cropping conditions is $1 \, \text{g/l}$ of water.

Foliar spray:



2.3

NUTRITIONAL CORRECTORS

POWDER MICRONUTRIENTS

- GROGREEN MICRONUTRIENTS covers all products related to trace element nutrition in powder form.
- Consisting of single (chelated) micronutrients such as iron (Fe), manganese (Mn), zinc (Zn), copper (Cu), boron (B) and molybdenum (Mo) as well as a combination of these micronutrients (Gromix).
- Crucial for the overall health of the crop.



Product	Chelate	Composition	Application	pH stability
Gromix ME	EDTA	1.3 % B 3.3 % Mn-EDTA 7.5 % Fe-EDTA 0.28 % Cu-EDTA 0.24 % Mo 1.3 % Zn-EDTA	Soil - hydroponics - foliar	3 - 6.5
Gromix MS	EDTA/ DTPA	1.5 % B 3 % Mn-EDTA 6.5 % Fe-DTPA 0.28 % Cu-EDTA 0.24 % Mo 1.3 % Zn-EDTA	Soil - hydroponics - foliar	3 - 7.5
Copper E-15	EDTA	15 % Cu - EDTA	Soil - hydroponics - foliar	4 - 8
Ferox 6	EDDHA	6 % Fe - EDDHA	Soil - Hydroponics	3 - 9.5
Ferral 6	EDDHA	6 % Fe - EDDHA	Soil - Hydroponics	3 - 11
Iron D-11	DTPA	11 % Fe - DTPA	Soil - hydroponics - foliar	3 - 7.5
Iron E-13	EDTA	13 % Fe - EDTA	Soil - hydroponics - foliar	3 - 6.5
Manganese E-13	EDTA	13 % Mn - EDTA	Soil - hydroponics - foliar	4 - 8
Zinc E-15	EDTA	15 % Zn - EDTA	Soil - hydroponics - foliar	4 - 8

Recommendations

Apply to prevent and correct deficiency symptoms.

Fertigation:

- Minor deficiency: total dose ranging from 5 to 10 kg/ha
- Intermediate deficiency: total dose ranging from 10 to 20 kg/ha
- Severe deficiency: total dose ranging from 20 25 kg/ha

Foliar spray:

Apply 0.5 - 2 kg/ha/application, repeat applications if deficiency is severe. Never use EDDHA products in foliar application.

FOLIAR - NUTRITIONAL CORRECTORS

BLUE-S



Low pH, high Boron and Sulphur formulation

with other micronutrients such as zinc and molybdenum. It is fully and instantly soluble in water. Acts as a buffering agent in alkaline/hard water conditions. Increases the efficiency of agrochemicals due to low pH.

Dissolves extremely fast!



Packing size 200 g, 1 kg, 5 kg

	Density: +/- ²	1.30 kg/liter
Specifications	W/W	W/V
Total Nitrogen (N)	4.30 %	5.60 %
Urea Nitrogen (N-NH ₂)	2.90 %	3.80 %
Organic Nitrogen (N)	1.40 %	1.80 %
Sulphur Trioxide (SO ₃), soluble in water	10.30 %	13.40 %
Boron (B), as Boric Acid, soluble in water	4.80 %	6.24 %
Boron (B), as Boron Monoethanolamine, soluble in water	3.30 %	4.29 %
Copper (Cu), EDTA chelated, soluble in water	0.005 %	0.006 %
Iron (Fe), EDTA chelated, soluble in water	0.15 %	0.195 %
Manganese (Mn), EDTA chelated, soluble in water	0.066 %	0.086 %
Molybdenum (Mo), soluble in water	0.285 %	0.370 %
Zinc (Zn), EDTA chelated, soluble in water	0.026 %	0.034 %

Foliar Spray

Crop	Dosage rate	Timing
Cereals	3 kg/ha	3 leaf stage - tillering
Corn	3 kg/ha	Before flowering
Sunflower	4 - 5 kg/ha	10 - 12 leaf stage before flower bud apparition
Sugar beet	3 kg/ha	4 - 6 leaf stage, repeat at row closure.
Cotton	2 - 3 kg/ha	Apparition of first flowers. Repeat with 20 - 30 day intervals
Potato	2 kg/ha	4 - 6 leaf stage. Repeat before maturity.
Oil seed rape	4 kg/ha	Before leaf development - rosette formation. Repeat in spring.
Vegetables (tomato, cucumber,)	3 kg/ha	Before flower opening. Repeat during fruit development stage.
Fruit trees (apple, pear, peach,)	3 - 5 kg/ha	Bud swelling stage.Repeat during fruit growth and post-harvest.
Citrus	3 - 4 kg/ha	On spring shoots. Repeat after physiological drop and post-harvest.
Grapes	3 - 5 kg/ha	On new shoots. Repeat at flower opening, véraison stage and post-harvest.
Olives	3 - 4 kg/ha	Before flower opening. Repeat after fruit set and post-harvest.
Ornamentals	2 - 3 kg/ha	Beginning of growth. Repeat with 15 day intervals.

Ca-B-Sul



Calcium formulation without Nitrogen

Synergised with sulphur and boron, pH buffer, a complex adjuvant system and glycine betaine. It is the perfect product to use during flowering to increase the fruit set rate.



Packing size 200 g, 1 kg, 5 kg

		Density: +/- 1.45 kg/liter	
Specifications	W/W	W/V	
Calcium Oxide (CaO), soluble in water	16.4 %	23.8 %	
Sulphur Trioxide (SO3), soluble in water	21.3 %	30.9 %	
Boron (B), as Boric Acid, soluble in water	0.765 %	1.11 %	
Boron (B), as Boron Monoethanolamine, soluble in water	0.979 %	1.42 %	
Glycine Betaine	5.0 %	7.25 %	

Crop	Rate of use (kg/ha)	Application rates	Application timing
Cereals	3-4	1-2	From first node until flowering.
Rice	3-4	1-2	Beginning of tillering until flowering.
Corn	3-4	1-2	Apply on tillering and before silking stage.
Sugar beet	3-5	2-3	Applications at 4 - 6 leaf stage, at row closure and during tuber growth.
Cotton	3-4	1-2	During the vegetative growth and on green bolls.
Potato	5-6	3-4	Apply on tuber initiation, repeat at the beginning of tuber growth and during tuber fattening.
Tomato/ Pepper	6-8	4-5	Apply during the accelerated vegetative growth, before flowering, after fruit setting and during the fruit growth and fattening stage.
Leafy vegetables	3-5	2-3	Apply with 2 week intervals, starting from the accelerated vegetative growth till 15 - 20 days before harvesting.
Apples/ Pears	6-8	4-5	Applications start after fruit set with 2 - 3 week intervals until 15 - 20 days before harvesting.
Grapes/ Berries	5-6	4-5	Apply throughout the growing season, from new shoot stage, after fruit set, véraison stage till 15 days before harvesting.
Citrus	5-6	4-5	According to deficiency, the applications may start on spring shoots, then after fruit set, after June drop, during fruit growth till before maturity.
Banana	6-8	4-6	Apply from vegetative growth until beginning of fruit apparition. Perform 2 extra applications directly on cluster during fruit maturation.
OSR	3-5	2-3	1st application: In Sep Oct. during leaf development – rosette formation (stage B). 2nd application: During stem elongation after winter dormancy (stage C). 3rd application: At free buds (stage D2).

Spray with 3 - 8 kg/ha/application; repeat as recommended. Never exceed a concentration of 0.5% (5g/l of water). Always use in sufficient water volume to guarantee full coverage of the foliage.

FOLIAR - NUTRITIONAL CORRECTORS

MAGIC

Magnesium complexed with Lignosulfonate

Enriched with micronutrients. It is specially formulated to boost magnesium uptake which makes it ideal for the efficient prevention and correction of magnesium deficiencies, ensuring maximum photosynthetic activity and quality of fruits and harvest.



Packing size 200 g, 1 kg, 5 kg

	Density: +/- 1.	35 kg/liter
Specifications	W/W	W/V
Total Nitrogen (N)	7.30 %	9.85 %
Nitric Nitrogen (N-NO3)	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), complexed by lignosulfonate, soluble in water	0.027 %	0.036 %
Zinc (Zn), complexed by lignosulfonate, soluble in water	0.010 %	0.014 %
Lignosulfonate	3.70 %	5.00 %

Recommendations

Soil application: 10-15 kg/ha each application every 10-12 days. Add into the nitrates tank.

<u>Foliar application:</u> Apply with 2–5 kg/ha/application. Repeat as recommended. Never exceed a concentration of 0.5% (5 g/l of water). Always use in sufficient water volume to guarantee full coverage of the foliage. Do not apply during very hot weather or on crops under water stress. The best application time is early morning or in the evening.

Crop	Rate of use (kg/ha)	Application rates	Application timing
Potatoes	3-5	4-5	Every 10-15 days, from the time the crop reaches 15-20 cm (beginning of tuber formation).
Sugar beet	3-5	1-2	When the crop has 4-6 leaves.
Vines	2-4	3-4	From the beginning of the vegetative growth until the beginning of the ripening, during berry softening. Specially recommended to pre- vent "Black Stem" disorder.
Fruit trees, olives, citrus	4-6	2-4	Before flowering and 4-6 applications of 2-4 kg/ha, every 10-15 days, starting at petals fall up to a month before picking.
Vegetables	2-4	3	When there is enough foliage, every 7-14 days.
Melon, watermelon, cucurbits	2-4	2	When the crop has 4-6 leaves. During the first appearance of the fruit.
Lettuce, endives	2-4	3	when there is enough foliage, every 7-14 days.
Strawberries	2-4	2	During the stage of green flower bud. At petals fall.
Cereals, corn, beans sunflower	2-4	1-2	When the crop has 4-8 leaves.

MICRO

Micronutrients complexed with glycine

Results in high foliar uptake and fast translocation within the plant.

The presence of amino acids helps the crop counteracting stress symptoms and increases vigour and growth. It stimulates chlorophyll production, increases photosynthesis and increases overall plant growth.



Packing size 200 g, 1 kg, 5 kg

	Density: +/- 1.50 kg/liter		
Specifications	W/W	W/V	
Total Nitrogen (N)	3.70 %	5.50 %	
Organic Nitrogen	3.70 %	5.50 %	
Boron (B), soluble in water	0.70 %	1.06 %	
Copper (Cu), Glycine chelated, soluble in water	0.15 %	0.23 %	
Iron (Fe), Glycine chelated, soluble in water	4.20 %	6.30 %	
Manganese (Mn), Glycine chelated, soluble in water	1.70 %	2.55 %	
Molybdenum (Mo), soluble in water	0.12 %	0.18 %	
Zinc (Zn), Glycine chelated, soluble in water	4.37 %	6.56 %	
Organic Carbon (C _{org})	8.20 %	12.30 %	

Foliar Spray

Foliar Spray		
Crop	Dosage rate	Timing
Tomato and pepper	0.5 - 1.5kg/ha	3 applications; 4-6 leaf stage, fruit set and fruit enlargement
Potato	0.5 - 1.5kg/ha	3 applications; 2 weeks and 5 weeks after tuber initiation and 2-3 weeks before harvest
Apple & pear	0.5 - 1kg/ha	3 applications; pre-flowering, during cell division and fruit enlargement
Corn	1 - 2kg/ha	2 applications; 4-6 leaves unfolded and beginning of reproductive stage
Soybean	1 - 2kg/ha	2 applications; at 5 nodes stage and beginning of the reproductive stage
Cereals	1 - 2kg/ha	1 application at heading stage
Rice	0.5 - 1.5kg/ha	3 applications; tillering, stem elongation and heading
Grape	0.5 - 1kg/ha	3 applications; before bloom, at fruit set and berry closure
Blueberry	0.5 - 1.5kg/ha	1 application at bloom
Cotton	1 - 2kg/ha	3 applications; leaf development, first square and boll development.
Pistachio	1 - 2kg/ha	3 applications: bud burst, flowering and nut set
Oilseed rape	0.5 - 1.5kg/ha	3 applications; bud development, pod development seed development
Melon	1 - 2kg/ha	3 applications; first bloom, 2-3 weeks and 5-6 weeks later
Onion	1 - 2kg/ ha	3 applications; 4-6 leaf stage, 6-8 leaf stage and bulbing
Stone fruit	0.5 - 1.5kg/ha	1 application at fruit enlargement
Cabbage & Broccoli	1 - 2kg/ha	2 applications; at 4-6 leaf stage and 2-3 weeks later
Sugarbeet	1 - 2kg/ha	3 applications; at 4-6 leaf stage, 6-8 leaf stage and before closure of rows
Carrot	0.5 - 1.5kg/ha	3 applications; at 4-6 true leaf stage, root expanding and 2 weeks later





BIOSTIMULANTS

3.1

SOIL IMPROVEMENT

BLACK MAGIC

Unique soil improving formulation

combining nitrogen, calcium, humic acid, sugars and trace elements in a low pH product. Black Magic will improve soil aeration, water holding capacity and soil drainage. It is especially recommended for alkaline and saline soils where the calcium will displace the sodium and will improve the root growth environment.



Packing size 200 g, 1 kg, 5 kg

	Density: +/	- 1.50 kg/liter
Specifications	W/W	W/V
Total Nitrogen (N)	8.40 %	12.60 %
Nitric Nitrogen (NO ₃)	8.40 %	12.60 %
Calcium Oxide (CaO), soluble in water	14.70 %	22.10 %
Boron (B), soluble in water	0.03 %	0.045 %
Copper (Cu), EDTA-chelated, soluble in water	0.09 %	0.135 %
Iron (Fe), EDTA-chelated, soluble in water	0.23 %	0.35 %
Manganese (Mn), EDTA-chelated, soluble in water	0.13 %	0.20 %
Molybdenum (Mo), soluble in water	0.02 %	0.03 %
Zinc (Zn), EDTA-chelated, soluble in water	0.066 %	0.10 %
Total humic acids	5.00 %	7.50 %
Total lignosulfonates	13.5 %	20.25 %
Oligosaccharides	1.45 %	2.18 %
Dry matter	13.0 %	19.5 %
Organic matter	9.0 %	13.5 %
Organic Carbon (C _{org})	5.2 %	7.8 %
C _{ord} /N ratio	0.619	

Recommendations

Fertigation:

General application rate of 3 - 8 kg/ha.

K-HUMUS 85

Potassium-Humate formulation

for ameliorating the soil. It will improve the soils physical, chemical and biological properties by providing organic carbon, potassium and a source of metabolizing energy for soil microbes. This in turn will increase soil aeration and the water holding capacity.



Specifications	W/W
Potassium Humate	85 %
Organic Matter	50 %
Potassium Oxide (K ₂ O) in dry matter	12 %
Organic Carbon	20 %

Recommendations

Thanks to its complete solubility, GROGREEN K-Humus is suitable for use in various irrigation systems as well as with foliar spray.

Soil application: Either direct application or fertigation

The dosage rate ranges from 1 - 2 kg/ha/application, with a total dose of 4 - 6 kg/ha/season. For sandy soils, the quantity is increased to 1.5 - 3 kg/ha/application and 6 - 8 kg/ha/season.

Field crops (cereals, alfalfa, corn, ...): Use of 1 - 2 kg/ha sprayed on the soil after sowing or planting.

Potatoes: Use of 1 - 2 kg/ha sprayed on the soil after sowing or planting. Repeat the application during the beginning of tuber initiation and 10 days later.

Open field vegetables (tomatoes, cucumbers, melons, water melon, onions, etc...): Applications start after sowing or transplanting, at the rate of 1 - 2 kg/ha. Repeat the application periodically at 1 kg/ha and with 15 - 20 day intervals.

Greenhouse vegetables: Use 2 kg/ha immediately after sowing or transplanting. Then repeat with 1 kg/ha every 15 - 20 days to reach a total amount of 6 - 8 kg/ha.

Fruit trees: Applications start with 2 kg/ha during the root activity in spring, then repeated from 2 - 3 times in the season at 1 - 2 kg/ha.

Foliar application:

Apply with a concentration of 25 g/100 L water. Repeat applications throughout the season.

NB: Dissolve well in water before spraying. Apply with a sufficient volume of water and avoid "run off". Do not apply during very hot weather or on crops under water stress. The best application time is early morning or in the evening when the moisture is high in the plant.

3.2

BIOSTIMULANTS

RELEAF OMNI

Gel biostimulant designed to enhance plant resilience

RELEAF OMNI is a cutting-edge liquid gel biostimulant specifically formulated to empower crops in overcoming a wide spectrum of abiotic stresses. Its balanced composition of potent organic compounds and amino acids enhances the plant's natural defense mechanisms and physiological resilience, ensuring robust growth and consistent yield even under challenging environmental conditions.



Packing size 1L, 5L, 10L

	Density: +	Density: +/- 1.18 kg/liter	
Specifications	W/W	W/V	
Total nitrogen (N)	5.0%	5.90%	
Organic nitrogen (N-org), from amino acids	4.0%	4.72%	
Ureic nitrogen (N-NH2)	1.0%	1.18%	
Total Potassium Oxide (K2O)	6.5%	7.7%	
Potassium Oxide (K2O), soluble in water	6.5%	7.7%	
Organic Carbon	17.5%	20.65%	
Dry matter	50%		

Recommendations

Fertigation:

Apply 3-5 I/ha/application.

For continuous fertigation, the recommended concentration in feed solutions varies from 0.5-2 ml/l (0.05 to 0.2%). The standard concentration for most cropping conditions is 1 ml/l of water.

Foliar spray:

Apply 2-4 I/ha/application. Apply a minimum of 2 times to get your desired result.

Never exceed a concentration of 0.5% (5 ml/l liter of water).

For more specified recommendations, visit our website.

PRO-FORTE

Plant fortifier that increases stress resistance

with plant-based amino acids, vitamins and polyols.

The amino acids and vitamin complexes will improve the vegetative and root development, induce flowering, pollination and fruit set, increase the quality and quantity of crops, and protect the crop against adverse conditions.



Packing size 200 g, 1 kg, 5 kg

	Density: +,	Density: +/- 1.25 kg/liter	
Specifications	W/W	W/V	
Total Nitrogen (N)	7.0 %	8.7 %	
Organic Nitrogen	7.0 %	8.7 %	
Organic Matter	30.0 %	37.5 %	
Organic carbon (C)	17.5 %	21.9 %	
Free Amino Acids	8.0 %	9.8 %	
Total amino acids	40.0%	48.8%	
Polyols	2.1%	2.6%	
Vitamin complex	0.1%	0.12%	

Recommendations

Fertigation

Arable crops (wheat, barley, etc...): Apply 3 - 4 kg/ha at the beginning of the season.

Repeat the application before flowering.

Field crops: Use 2 - 4 kg/ha at 4 - 6 leaf stage. Repeat before flowering and after fruit set.

Greenhouse crops: Use 3 - 4 kg/ha during critical growth stages starting from post-transplant stage.

Fruit trees, Grapes: Apply 6 – 10 g/tree at the beginning of the growing season, then after fruit set until the beginning of fruit maturity. Repeat the application at post-harvest.

Foliar spray:

Use 200 - 300 g/ 100 L of water per treatment. Applications coincide with the critical stages of plant growth (transplantation, root system installation, flowering and fruit set, fruit growth, before winter, pesticide spraying,...)





Lima Europe NV

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