



DRIP IRRIGATION TAILOR MADE NPK. GRINTA. SUBTIL.



Lima Europe produces superior quality, cost-effective, fully soluble fertilizers that provide farmers higher yields and better quality. These fertilizers are products which contain three primary nutrients, Nitrogen, Phosphorus and Potassium and which also may contain secondary and micronutrients. Our powder NPK products enrich the soil with nutrients for ready uptake due to the carefully studied formulations with different ratio according to the specific crop, variety, and nutritional needs of the phenological phases of the crops to be treated. We have also taken into consideration the different soil characteristics of cultivated soils, and varied climatic conditions.

Grogreen NPK is an excellent water soluble NPK line for drip irrigation. These formulations cover a wide range of nutrient ratios. Our products are balanced with a high nitrate nitrogen content, chlorine free and are instantly soluble. Due to its premium ingredients and balanced composition enriched with essential chelated micronutrients, Grogreen NPK is the basis of successful fertigation programs. This range consists of products adapted to the nutritional requirements of crops in different stages of development.

All our DRY-TEC formulas contain a full range of micronutrients. The metal nutrients (Iron, Manganese, Copper and Zinc) are chelated to improve the availability and uptake by the plant. The ratio between the micronutrients is a perfect balance for the nutritional need of a wide range of crops.

Unbalance often creates deficiency and in rare cases toxicity problems in plants.

Preparing feed solutions with our powder NPK formulas is easy, fast and safe. Simply select the appropriate formula, according to crop and growing conditions, weigh out the correct amount of the chosen formula and dissolve in water.

Storage

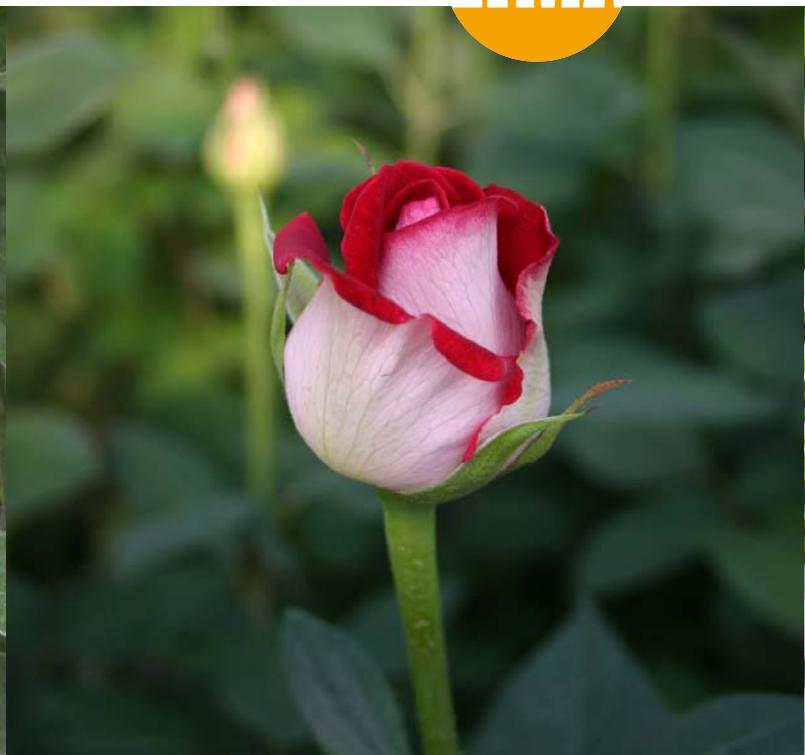
Lima Europe's fertilizers will not deteriorate in quality, provided that the bags are protected against rain, humidity, direct sunlight and high temperature. Once opened, bags should be properly closed to prevent humidity uptake and thus to keep the product free flowing.

Solutions

Once prepared, the fertilizer solution should be kept in a closed tank, located in a well ventilated and shaded area at a temperature above 7 degrees Celsius.

How to prepare our NPK fertigation solutions

Certain basic rules must be followed when preparing fertigation solutions, especially when fertilizers are mixed with each other, or with other products.



Guidelines for dissolving

- Start with a clean and empty tank.
- When possible, use water with a minimum temperature of 10 °C.
- Fill the tanks for 30 to 50% with clean water before adding the fertilizers.
- Empty the fertilizer bags slowly, under continuous stirring.
- Fill the tanks with the rest of the fresh water.
- Continue to stir for at least 5 minutes after the last portion of fertilizer has been added.
- Before starting to fertigate, wait minimum 15 minutes for the dissolving process to complete.

Concentrations

Stock tank solutions

The standard recommendation is to make a 10% stock solution (10 kg Grogreen NPK product in 100 l water). After preparation, the stock solution is diluted as required.

Final Solutions

The standard recommendation for most cropping situations is 1 g/l water. In a bulk tank system, this is obtained by adding 1 kg Grogreen NPK to 1,000 l water. This information is only a general guideline.

Mixing Products

- Grogreen NPK range is compatible with most common agrochemicals. Follow the mixing instructions indicated on the agrochemical product labels. Perform a jar test if information or experience is lacking.
- Recommended mixing sequence: water > acids > liquids > Grogreen NPK > micronutrients > Chelates.
- To prevent precipitation, never mix our powder NPK product and calcium nitrate in one tank. When both fertilizers are needed, use a two-tank system or fertigate alternately.
- To protect your eyes during filling, wear a pair of safety goggles.
- Do not mix the NPK product 13-7-20+8CaO+2MgO with any other product.

General recommendations

- Crops suffering from drought stress should be watered before the feed solution is applied.
- Feeding should start right after planting or 2-3 weeks later if a base fertilizer is used.
- To prevent leaf burn, rinse foliage with plain water after fertilizer application via overhead irrigation systems.
- Check the nutrient level in the soil regularly by taking soil analyses.



TAILOR-MADE NPK.

The future of Agriculture

Our Grogreen Tailor-made powder NPK allow farmers to develop an optimized farming practice, tailored for the crops and local conditions, to meet their requirements. This provides a healthy increase in crop yields.

This range consists of tailor-made products to meet specific crop requirements and cater for different locations and soil types, as well as for the different weather conditions. They are ideal for fertigated open-field vegetables, fruit trees, open-field crops and greenhouses. The following table shows the most used formulations:



Starter	Vegetative	Balanced	Fruit development
15-30-15	28-14-14	20-20-20	12-12-36 + 2 MgO
13-40-13	30-10-10	19-19-19	10-5-40 + 2 MgO
12-36-12	24-10-10	18-18-18 + 2 MgO	15-15-30 + 2 MgO
10-52-10	28-10-10 + 2 MgO	17-17-17 + 3 MgO	13-7-20 + 8 CaO + 2 MgO

Properties

- Our products guarantee a balanced nutrient supply thus delivering better yield and quality while saving both costs and the environment.
- Our NPK are unique fertilizers and have followed a production process that ensures a formula with the maximum solubility of their nutrients without clogging of the irrigation system.
- More efficient crop nutrition.
- Supplies correctly balanced amounts of the three most important nutrients for optimum growth.
- High nutrient concentration and high nutrient availability in a single product.
- Chloride and sodium free.
- Fully water-soluble, free flowing and fine crystalline powder product. Free of impurities and residues.
- Fully chelated and balanced mix of micronutrients.
- Safe and easy to store and use.
- Complete plant nutrition scheme throughout the growth cycle with a wide range of tailor-made formulas.

Application

The recommended concentration of Grogreen Tailor-Made NPK in feed solutions varies from 0.5 to 2 g/l (0.05 to 0.2 %). The standard recommendation for most cropping conditions is 1 g/l water.



GRINTA.

Crop specific fertilizers for soil grown crops

Grogreen Grinta is a fertilizer program in a bag. Our products are a water-soluble fertilizer line for soil grown horticultural crops. This range of products has a double objective: guaranteeing the availability of all nutrients in the correct proportions and providing considerable convenience in usage. Every formula is fine-tuned to the nutrient requirements of its specific target crop. Grogreen Grinta is not only a fertilizer, it is a fertilizer program on its own.



	Tomato Pepper	(Water)melon Cucumber	Rozes Carnation	Ca and Mg supply
	SOLA	CURBI	ROCA	CAL
	14-10-26	17-8-22	17-8-20	13-7-20
Content:	%	%	%	%
Nitrogen (N), total:	14	17	17	13
Nitrate Nitrogen (N-NO ₃)	8,9	10,4	9,6	11
Ammonium Nitrogen (N-NH ₄)	5,1	6,6	7,4	0,3
Urea Nitrogen (N-NH ₂)	-	-	-	1,7
Phosphorous Pentoxide (P ₂ O ₅), soluble in water	10	8	8	7
Potassium Oxide (K ₂ O), soluble in water	26	22	20	20
Magnesium Oxide (MgO), soluble in water	3	3	3	2
Calcium Oxide (CaO), soluble in water	-	-	-	8
Boron (B), soluble in water	0,025	0,025	0,04	0,025
Copper (Cu), EDTA-chelated, soluble in water	0,01	0,005	0,01	0,01
Iron (Fe), EDTA-chelated, soluble in water	0,08	0,09	0,09	0,08
Manganese (Mn), EDTA-chelated, soluble in water	0,045	0,05	0,03	0,025
Molybdenum (Mo), soluble in water	0,004	0,004	0,006	0,004
Zinc (Zn), EDTA-chelated, soluble in water	0,025	0,02	0,03	0,025

Properties

- Our products guarantee a balanced nutrient supply thus delivering better yield and quality while saving both costs and the environment.
- Grinta products are unique fertilizers and have followed a production process that ensures a formula with the maximum solubility of their nutrients without clogging of the irrigation system.
- More efficient crop nutrition.
- Supplies correctly balanced amounts of the three most important nutrients for optimum growth during the entire growth cycle.
- High nutrient concentration and high nutrient availability in a single product.
- Chloride and sodium free.
- Nutrients immediately available for plant uptake.
- Contains chelated micronutrients which are readily available, stable and long lasting.
- Easy and safe to handle.
- Stock solution is easy to prepare.
- It is potassium nitrate based with optimal required sulfate content avoiding risk of salinisation.

Application

The recommended concentration of Grogreen Grinta in feed solutions varies from 0.5 to 2 g/l (0.05 to 0.2 %). The standard recommendation for most cropping conditions is 1 g/l water.

SUBTIL.

Crop specific fertilizers for hydroponics

Grogreen Subtil offers a convenient and foolproof solution for fertilizing substrate grown crops. Our formulations exist for a wide variety of water qualities and growth stages without deviating from the optimal nutrient solutions. Both with surface and well water, Grogreen Subtil fertilization matches pH and nutrient proportions thanks to its flexible and well considered concept.



	Tomato/Pepper	Cucumber/Melon
	GROGREEN SUBTIL SOLA	GROGREEN SUBTIL CURBI
	14-10-26	17-8-22
Content:	%	%
Nitrogen (N), total:	7,4	9,4
Nitrate Nitrogen (N-NO ₃):	7,3	8,7
Ammonium Nitrogen (N-NH ₄):	0,1	0,7
Phosphorous Pentoxide (P ₂ O ₅), soluble in water:	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

Properties

- Our products guarantee a balanced nutrient supply thus delivering better yield and quality while saving both costs and the environment.
- Subtil products are unique fertilizers and have followed a production process that ensures a formula with the maximum solubility of their nutrients without clogging of the irrigation system.
- They are based on the latest optimal nutrient solutions for substrate grown crops.
- Preparing the stock solution is simple and chances to make mistakes are reduced considerably.
- Chelates provide stability up to a pH of 7.5.
- High nutrient concentration and high nutrient availability in a single product.
- Chloride and sodium free.
- Nutrients immediately available for plant uptake.
- More efficient crop nutrition.
- Easy and safe to handle.
- Supplies correctly balanced amounts of the three most important nutrients for optimum growth during the entire growth cycle.

Application

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. The recommended concentration of Grogreen Subtil in feed solutions varies from 0.5 to 2 g/l (0.05 to 0.2 %). The standard recommendation for most cropping conditions is 1 g/l water.