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# Fertirrigation/Foliar



Green



Product from Spain









Soldenso GEL Advantages
Soldenso GEL Characteristics
Soldenso GEL Formulations







MIXTURE OF RAW MATERIALS, as are most of NPK fertilizers in powder form.

ALL THE NUTRIENT, during use, while avoiding sedimentation in the storage containers of the nutrient solution. In contrast, common NPK water soluble powder fertilizers, which are produced through a mixture of rawmaterials, have increase variability in grain size that results in a non-uniform dilution of nutrients, since the smallest grains are dissolved firstly.

THE CONDUCTIVITY AND THE SALINITY INDEX OF Soldenso GEL ARE MAINTAINED IN VERY LOW LEVELS, so that the soil will not be burnered with undesirable, salt concentration.



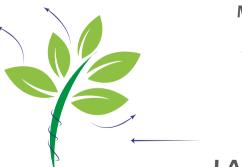
- 1. **Neutral pH**, unlike most liquid foliar are highly acid or highly alkaline. Soldenso GEL can be used at higher doses, not being aggressive with the cells that form stomas.
- 2. More comfortable for the farmer to dosing per volume instead of on weight.
- 3. Best solution in terms of speed and ease to use. Allow higher liquid dispersion, homogeneity than solid products.
- 4. Guarantee solubility by its GEL formulation.
- 5. **Adjuvant**: promotes effectiveness of plant protection products when applied jointly.
- 6. Multiple formulas for different crops and different stages of growth.



**GREATER PERSISTENCE** 

**BETTER UPTAKE** 

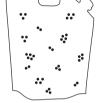
HIGHER EFFICIENCY





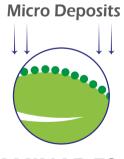






**NORMAL NPK** 











The range of Soldenso GEL foliar products, of high quality, are specially designed and formulated for all types of crops, where their use is recommended, combined according to the specific needs of the crop. Thanks to its gel formulation, its form of action is as fast and effective as it is continuous and prolonged.

Soldenso GEL are new products that due to its gelatinous structure increase the retention time of the product and decrease the surface tension of the leaves favoring the opening of the stomas and the cuticular absorption, thus increasing the amount of nutrients absorbed.

It acts as a protective colloid of nutrients, guaranteeing its structure and properties, avoiding chemical degradation and losses due to evaporation or formation of secondary compounds. Being a GEL fertilizer, and having a non-ionic character, it is compatible with most phytosanitary treatments, increasing their effectiveness.

The formulated foliar products of the Soldenso GEL range combine ease of use with excellent results. By offering a gradual release of the nutrients applied to them, the effect is much longer than that offered by non-formulated foliar products. This detail is very important, as this prolongs the balanced development of the crops.

The formulated foliar products are particularly durable and effective on the leaf of the plant, so that the farmer obtains the advantage of being able to separate applications much more over time.

The main route for the absorption of nutrients is via rhizosphere, where the roots of the crop interact with soil particles, as well as with microorganisms. Even so, the rhizosphere is not the last way plants have to absorb nutrients.

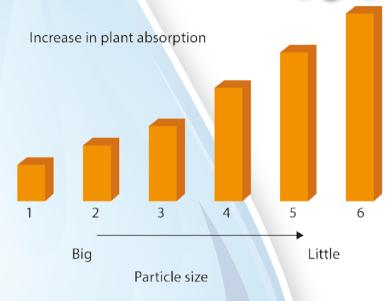
The absorption can also take place via the Philosphère, which is the zone of interaction of the plant with the atmosphere, also known as the aerial part of the plant, or foliar mass.

Foliar absorption has been widely demonstrated by a multitude of researchers. In the same way as the rhizosphere, the philospher is a dynamic and very complex environment.

The leaf surface is acidic and hydrophobic, with the presence of villi (trichomes) that present different utilities for plants: they discourage the presence of insects, trap water, secrete substances, acid and protect the plant against excessive perspiration in dry environments.

The leaf trichomes, with the same shape as an umbrella or an umbrella, are specially designed to reduce such water losses through transpiration, sometimes covering the entire surface of the underside of the leaf and also being present in a smaller number in the leaf beam.





Nutrient level of the leaf



Product formulated with SOLDENSO.
Controlled release with a longer effect.
Level of nutrients maintained.
Small number of applications.

## Figure 1. Difference in the form of product, for the same weight of potassium formulated, in several particle sizes. once applied to the

leaves.

#### Raw materials used in the formulation

Each product of soldense GEL is manufactured with high quality nutritional components. The final formulation of the product and its uses

will depend on the raw materials.

The final products include gel-like formats and high concentration suspensions. All of them are manufactured with high purity raw materials.

In its natural state, some raw materials for the manufacture of foliar fertilizers are associated with metals. For this reason the quality control

experts of **Grange** saft measure the specifications and content of heavy metals of all the raw materials used in the formulations of the final products.





## SIZE OF THE PARTICLES OF THE SALORISO GEL PRODUCTS

In order to offer quality products, we must pay great attention to the size of the particles of the raw materials used for manufacturing, since this is a parameter that drastically affects how the plant absorbs the nutrient. Figure 1 shows difference in the intake of product for the same weight of potassium ( $K_2O$ ) formulated, in various particle formats, once applied to the leaves.

The use of smaller particles ensures that, for a given weight of nutrient, there is a larger available surface which positively influences the chemical activity and improves the efficiency of the absorption.



Thanks to the greater number of smaller particles in the foliar products, the products extend more by all the leaf, maximizing the cover and increasing so much the absorption as the residual activity of the nutrients in the surface of the leaf. Furthermore, using a controlled particle size minimizes the risks of phytotoxicity and burns and avoids a greater concentration of a specific element at the specific point of contact with the leaf.

#### COFORMULANTS

Co-formulants are chemical compounds that are used to control and improve the behavior of the micronutrients of raw materials:



#### **WETTING AGENTS**

Wetting agents help ensure that the product is properly extended on the surface of the leaf or fruit. The larger the contact area between the target and the product, the greater the potential take.

The wetting agents also increase the level of evaporation of the spray or spray, allowing the product to be removed faster and the application is resistant to the risk of washing by rain, as quickly as possible.

#### **ADHERENT AGENTS**

The formulated foliar fertilizers also contain adherent agents, which help to retain the nutrient on the surface of the leaf of the plant, ensuring that a minimum amount of nutrients are lost by washing caused by irrigation water or rain. This guarantees a consistent performance even if the weather conditions are not favorable.

#### ABSORBENT AGENTS

The absorbent agent helps the penetration of nutrients through the cuticle of the plant and the seizures, as well as the mobilization of the whole plant.

## MAIN ADVANTAGES OF THE PRODUCTS FORMULATED WITH SAID GEL

The formulated foliar products of the delate of the mutrients applied to them, the effect is much longer than that offered by non-formulated foliar products. This detail is very important, since this prolongs the balanced development of the crops.

The formulated foliar products are particularly durable and effective on the leaf of the plant, so that the farmer obtains the advantage of being able to separate applications much more over time.



## **YELLOW GEL** 30+30+30+Te

Application rate: 4-8 litres per hectare depending on the crop and the growth stage.

### GUARANTEED ANALYSIS W/V %

Phosphorus oxide $(P_2O_5)$ soluble in water	
Potassium Oxide (K <sub>2</sub> O) soluble in water	
Boron (B) soluble in water	0,023
	0,023
Copper (Cu) chelating agent EDTA	
Imanganese (Iman) chelating agent EUTA	
	0,0012
Zinc (Zn) chelating agent EDTA	

SUPER Concentrated Fertilizer

The High-Quality Goods Of



## **BLUE GEL** 28+11+14+Te

Application rate: 20-40 litres per hectare depending on the crop and the growth stage.

### GUARANTEED ANALYSIS W/V %

Total nitrogen (N)	28
Phosphorus oxide $(P_2O_5)$ soluble in water	11
Potassium Oxide $(K_2^{-}O)$ soluble in water	14
Boron (B) soluble in water	0.024
Iron (Fe) chelating agent EDTA	0.028
Copper (Cu) chelating agent EDTA	0.016
Manganese (Mn) chelating agent EDTA	0,016
Molybdenum (Mo) solube in water	0,008
Zinc (Zn) chelating agent EDTA	0.012



SUPER Concentrated Fertilizer

#### GREEN GEL 10+50+10+Te

Application rate: 10-30 litres per hectare depending on the crop and the growth stage.

#### GUARANTEED ANALYSIS W/V %

Total nitrogen (N) 10 Phosphorus oxide ( $P_2O_5$ ) soluble in water 50 Potassium Oxide ( $K_2O$ ) soluble in water 10 Boron (B) soluble in water 0,024 Iron (Fe) chelating agent EDTA 0,028 Copper (Cu) chelating agent EDTA 0,016 Manganese (Mn) chelating agent EDTA 0,016 Molybdenum (Mo) solube in water 0,008 Zinc (Zn) chelating agent EDTA 0,0012



Application rate: 20-40 litres per hectare depending on the crop and the growth stage.

#### GUARANTEED ANALYSIS W/V %

Total nitrogen (N) I
Phosphorus oxide (P2O5) soluble in water 0
Potassium Oxide (K2O) soluble in water 60
Boron (B) soluble in water 0,024
Iron (Fe) chelating agent EDTA 0,016
Manganese (Mn) chelating agent EDTA 0,016
Molybdenum (Mo) solube in water 0,008
Zinc (Zn) chelating agent EDTA 0,012



SUPER Concentrated Fertilizer

## Other Soldenso GEL formulations



Sol Denso Gel 10-10-10+Te Sol Denso Gel 12-12-12+Te Sol Denso Gel 15-10-15+Te Sol Denso Gel 15-15-15+Te Sol Denso Gel 18-18-18+Te Sol Denso Gel 20-20-20+Te Sol Denso Gel 22-22-22+Te Sol Denso Gel 24-24-24+Te Sol Denso Gel 25-20-25+Te Sol Denso Gel 25-25-25+Te Sol Denso Gel 27-27-27+Te Sol Denso Gel 30-30-30+Te

Sol Denso Gel 41-06-00+Te Sol Denso Gel 43-00-00+Te Sol Denso Gel 36-06-08+Te Sol Denso Gel 35-05-05+Te Sol Denso Gel 30-30-25+Te Sol Denso Gel 30-30-05+Te Sol Denso Gel 30-10-10+Te Sol Denso Gel 32-10-10+Te Sol Denso Gel 30-05-05+Te Sol Denso Gel 29-09-09+Te Sol Denso Gel 28-11-14+Te Sol Denso Gel 25-06-10+Mg+Te Sol Denso Gel 25-10-10+Te Sol Denso Gel 24-18-18+Te Sol Denso Gel 24-17-07+Te Sol Denso Gel 23-06-06+Te Sol Denso Gel 20-15-15+Te Sol Denso Gel 20-05-10+Te



Sol Denso Gel 00-30-10+Te Sol Denso Gel 00-50-37+Te Sol Denso Gel 00-52-34+Te Sol Denso Gel 00-60-20+Te Sol Denso Gel 00-69-25+Te Sol Denso Gel 05-35-35+Te Sol Denso Gel 06-24-06+Te Sol Denso Gel 08-37-08+Te Sol Denso Gel 10-23-10+Te Sol Denso Gel 10-30-10+Te Sol Denso Gel 10-40-10+Te Sol Denso Gel 10-50-10+Te Sol Denso Gel 10-70-05+Te Sol Denso Gel 12-40-12+Te Sol Denso Gel 12-45-12+Te Sol Denso Gel 12-59-00+Te Sol Denso Gel 12-59-06+Te Sol Denso Gel 12-61-00+Te Sol Denso Gel 12-64-32+Te

Sol Denso Gel 12-65-05+Te Sol Denso Gel 13-40-13+Te Sol Denso Gel 14-47-00+Te Sol Denso Gel 15-65-15+Te Sol Denso Gel 16-51-16+Te Sol Denso Gel 17-30-30+Te Sol Denso Gel 17-44-00+Te Sol Denso Gel 16-69-16+Te Sol Denso Gel 18-41-00+Te Sol Denso Gel 20-30-10+Te





Sol Denso Gel 00-00-60+Te Sol Denso Gel 00-10-50+Te Sol Denso Gel 00-20-30+Te Sol Denso Gel 00-22-26+Te Sol Denso Gel 00-37-50+Te Sol Denso Gel 00-45-50+Te Sol Denso Gel 00-45-60+Te Sol Denso Gel 01-00-50+Te Sol Denso Gel 1'5-00-60+Te Sol Denso Gel 1'5-00-60+Te Sol Denso Gel 1'5-00-80+Te Sol Denso Gel 10-05-35+Te Sol Denso Gel 02-04-35+Te

Sol Denso Gel 00-00-50+Te

Sol Denso Gel 3'5-37-50+Te
Sol Denso Gel 04-40-50+Te
Sol Denso Gel 05-00-60+Te
Sol Denso Gel 05-00-80+Te
Sol Denso Gel 05-05-42+Te
Sol Denso Gel 05-40-50+Te
Sol Denso Gel 05-45-50+Mg+Te
Sol Denso Gel 08-04-35+Te
Sol Denso Gel 08-06-36+Te
Sol Denso Gel 08-08-60+Te
Sol Denso Gel 09-18-27+Te
Sol Denso Gel 10-05-30+Te
Sol Denso Gel 10-06-30+Te
Sol Denso Gel 10-10-40+Te

Sol Denso Gel 10-10-50+Te Sol Denso Gel 10-15-30+Te Sol Denso Gel 11-00-46+Te Sol Denso Gel 12-08-16+Te Sol Denso Gel 12-05-42+Te Sol Denso Gel 12-08-16+Te Sol Denso Gel 12-12-44+Te Sol Denso Gel 13-15-44+Mg+Te Sol Denso Gel 13'5-00-46+Te Sol Denso Gel 15-05-30+Te Sol Denso Gel 15-05-40+Te Sol Denso Gel 17-08-53+Te Sol Denso Gel 17-08-53+Te Sol Denso Gel 17-30-30+Te

## Other Soldenso GEL formulations Soldenso COMBI

Soldenso	GEL+ Amino Acids(Aa	)	
Sol Denso Gel	09-48-09+5%AA	Sol Denso Gel	20-05-10+2%AA
Sol Denso Gel	10-50-10+5%AA	Sol Denso Gel	20-20-20+2%AA
Sol Denso Gel	10-15- <mark>30</mark> +5%AA	Sol Denso Gel	20-20-20+5%AA
Sol Denso Gel	15-10-3 <mark>0+</mark> 5%AA	Sol Denso Gel	22-22-22+5%AA
Sol Denso Gel	10-50-10 <mark>+2%AA</mark>	Sol Denso Gel	22-22-22+5%AA+3%MgO+4%B
Sol Denso Gel	10-50-10+ <mark>5%</mark> AA	Sol Denso Gel	24-13-15+1'5%AA
Sol Denso Gel	10-50-10+1 <mark>0%</mark> AA	Sol Denso Gel	24-24-24+4MgO+2%AA
Sol Denso Gel	10-70-05+2 <mark>%A</mark> A	Sol Denso Gel	25-14-17+1'3%AA
Sol Denso Gel	12-06-32+2 <mark>%A</mark> A	Sol Denso Gel	30-16-21+1'5%AA
Sol Denso Gel	20-00-25+20 <mark>%Cao+2%AA</mark>	Sol Denso Gel	45-00-00+5%AA



## Other Soldenso GEL formulations

Soldenso GEL+ Macronutrients

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	Denso	( .0	( )( )_	1 ( )_	<b>イ厂 )</b> エ	3%IV	$1\alpha()$ .	$\perp \mid \alpha$
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#### Sol Denso Gel 10-05-30+0'5%MaO+Te

#### Sol Denso Gel 18-14-28+6%MgO+15%SO,

Sol Denso Gel 20-20-20+3%B+2%7n

Sol Denso Gel 20-20-20+4'7%MaO+Te

Sol Denso Gel 24-16-32+4%MaO

Sol Denso Gel 25-10-10+2%MaO

Sol Denso Gel 25-25-20+5%MaO

Sol Denso Gel 25-25-25+3%MaO+Te

Sol Denso Gel 25-25-25+3'5%MaO+Te

Sol Denso Gel 25-25-25+5%MaO

Sol Denso Gel 25-25-28+5%MaO

Sol Denso Gel 27-27-27+3%MgO+Te

Sol Denso Gel 30-00-00+2%Fe

Sol Denso Gel 32-08-16+6%MgO+15%SO,

Sol Denso Gel 36-12-12+3%MaO



## Other Soldenso GEL formulations

Soldenso GEL+ Seaweed

Sol Denso Gel 10-15-30+10%Seaweed Sol Denso Gel 15-10-30+10%Seaweed Sol Denso Gel 15-15-30+10%Seaweed

Sol Denso Gel 20-20-20+10%Seaweed+TE Sol Denso Gel 20-20-20+20%Seaweed+TE Sol Denso Gel 20-20-26+20%Seaweed+TE





Sol Denso Gel 11-00-46+2%HA



FULUUS GEL 780 WIION CALCIO STRATTII GEL



Yellow

dange saft

Blue

Green

Red