



SICOGREEN GEL foliar NPK fertilisers

Introduction & Advantages & Sales rationale

04/2022

Our new range of SICOGREEN GEL high quality foliar products, are specially designed and formulated for all types of crops, where their use in combination is recommended according to the specific needs of the crop. Thanks to its formulation in gel form action is both quick and effective as continuous and prolonged. SICOGREEN GEL are new products **which due to its gel structure increase the retention time of the product and lowers the surface tension of the sheets favoring the opening of the stomata and cuticle absorption, thereby increasing the amount of absorbed nutrients.**

They act as a protective colloid of nutrients, ensuring their structure and properties, avoiding chemical degradation and evaporation loss or formation of secondary compounds. Being GEL fertilizers and having no ionic character they are compatible with most PHYTO-SANITARY treatments, increasing their effectiveness.

The main pathway for nutrient uptake is via RHIZOSPHERE, where the crop roots interact with soil particles and microorganisms, still the RHIZOSPHERE is not the final pathway of plants to absorb nutrients.

The absorption can also take place via the PHYLLOSPHERE, which is the area of plant interaction with the atmosphere also known as the aerial part of the plant or leaf mass.

The leaf surface is acidic and hydrophobic presence of fuzziness (TRICHOMES) which have different uses for plants: deterring the presence of insects, trap water, secrete substances, acid and protect the plant from excessive perspiration in dry environments.

Foliar TRICHOMES with identical shape even umbrella or parasol are specially designed to reduce the losses of water by transpiration covering sometimes entire surface of the lower leaf surface and being also present in smaller numbers in the upper leaf surface.

The formulation of our SICOGREEN GEL foliar fertilizers is therefore particularly important in this culture **to ensure that foliar application reaches the maximum percentage of the active surface of the sheet** and therefore the important organs in the foliar absorption.

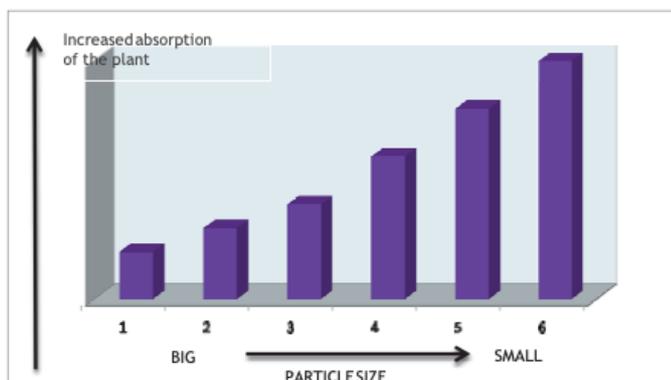
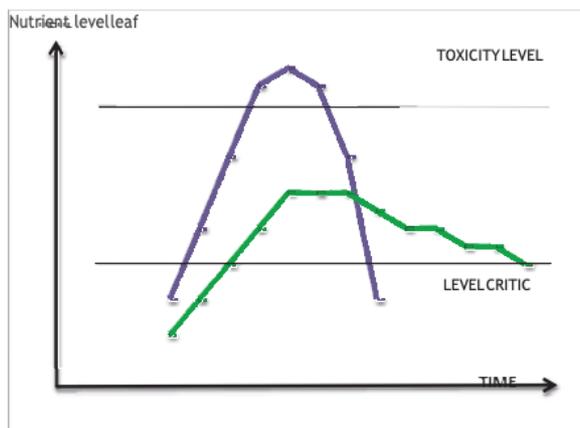


Figure 1:
Difference in product form, for the same weight of potassium formulated in various particle size once applied to the leaves.



Graphic 2:
Comparison of toxicity and durability between a raw material unformulated and SICOGREEN GEL

Typical behavior of unformulated raw materials.

Toxicity hazard.
It requires repeated application.

Formulated product with SICOGREEN GEL.
Controlled release with longer effect.
Nutrient level maintained. It reduced number of applications.

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**PRODUCT INFO
& DATASHEET**

RAW MATERIALS USED IN THE FORMULATION

Each product is made with nutritional SICOGREEN GEL high quality components. Raw materials will depend on the final formulation of the product and its use.

The final products include gel type formats and suspensions of high concentration. All are made with raw materials of high purity.

In its natural state, some raw materials for the production of foliar fertilizers are associated with metals.

For this reason experts in quality control measure SICOGREEN specifications and heavy metal content of all raw materials used in the formulations of the final products.

PARTICLE SIZE OF SICOGREEN GEL PRODUCTS

In order to provide quality products, we must pay great attention to particle size of the raw materials used for manufacturing, as this is a parameter that drastically affects how the plant absorbs the nutrient. Figure 1 shows difference in making product for the same weight of potassium (K₂O) formulated in various formats particles, once applied to the leaves.

The use of smaller particles ensure that with a given weight of nutrient, there is a greater surface which positively influences the chemical activity and improves the absorption efficiency.

Thanks to the greater number of smaller particles in leaf products, products extend across the sheet, maximizing the coverage and increasing both absorption and the residual activity of nutrients in the leaf surface.

Moreover, using a controlled particle size, risks of phyto-toxicity burns are minimized and a greater concentration of a specific elements is avoided in the specific point of contact with the sheet.

CO- FORMULANTS

CO-FORMULANTS are chemical compounds that are used to control and improve the performance of raw materials & micro-nutrients:

* WETTING AGENTS

Wetting agents help ensure that the product is properly spread on the surface of the leaf or the fruit, the higher the contact area between the target and the product the greater the potential decision.

Moisturizers also increase the evaporation spray or spraying making the application resistant to washing by rain or irrigation water.

* Adherents AGENTS

Foliar fertilizers also contain TACKIFIERS formulated to help retain nutrients in 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 ensures consistent performance even if weather conditions are not favorable.

* ABSORBENTS

The absorbent agent helps the penetration of nutrients through the plant cuticle and lose-stomas as well as the mobilization of the entire plant.

CONCLUSION: MAIN ADVANTAGES OF PRODUCTS MADE WITH SICOGREEN GEL

SICOGREEN GEL foliar products range **combines ease of use with excellent results**. By providing a gradual release of nutrients applied to them, the effect is much longer than that offered by foliar products unformulated.

This detail is very important, as this balanced crop development is prolonged.

Foliar formulated products are particularly durable and effective in plant leaf, so that the farmer gets the advantage of more separate applications over time.