

Technical

Information

FERTIORGAN CALCIUM

Properties and benefits



www.artal.net

The Product



FERTIORGAN CALCIUM is a product composed by organic matter from North-European conifers' lignin, and Calcium complexed with lignosulphonic acid.

Its elements confer the product several properties

- **Calcium corrector**
- **Soil improver**
- **Salinity corrector**

Calcium Corrector

Calcium is a secondary macroelement involved in plant metabolism in several ways:

- **Activates auxin metabolism, which improves growth**
- **Helps dealing against hydric stress by regulating stomata occlusion**
- **Participates in nutrients absorption**
- **Reinforces cell wall structure increasing its stiffness**
- **Regulates thermal shock anti stress response**
- **Improves immune system through protein calmoduline**
- **Improves fruit quality**

Calcium Corrector

FERTIORGAN CALCIUM contains complexed Calcium with **lignosulfonic acid**, fully available for the plants.

This will make Calcium not being a limiting element for plants growth, and the crop will be benefit with:

- **Larger biomass production**
- **A better response against biotical and abiotical stress**

Soil Improve

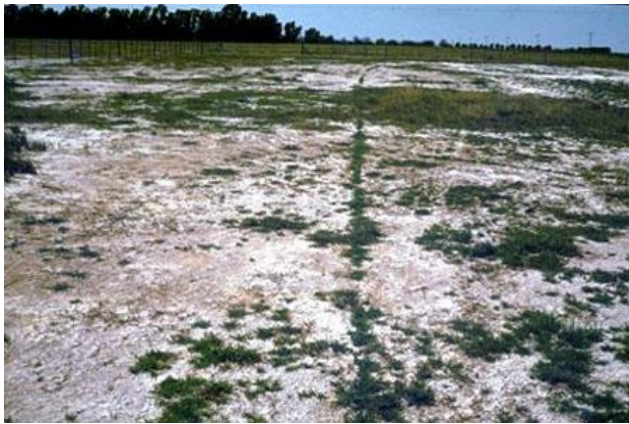
The combination of organic matter and Calcium present in **FERTIORGAN CALCIUM** contributes to the soil structure and quality improvement.

- **Agglutinates soil compounds favouring bacteria decomposition in the soil.**
- **Decomposed organic matter acts as a nutrient for the crop, increasing production.**
- **Improves soil aeration, increasing its Oxygen quantity.**
- **Increases soil sponginess, improving its water retention capacity.**
- **Displace Sodium ions from the Exchange Complex, improving its quality for the crop**

Saline Corrector

There are several kinds of ions in the soil in aqueous dissolution. The **positive charged** ones are called **cations** and they are attached to the soil due to soil negative charge caused by the clay and the organic matter within it.

One of the most common cations in saline soils is **Sodium** (Na^+), dissociated from salt (NaCl)



Salty soils examples

Saline Corrector

Sodium excess in the soil is harmful for the plants due to their high affinity to absorb this element.

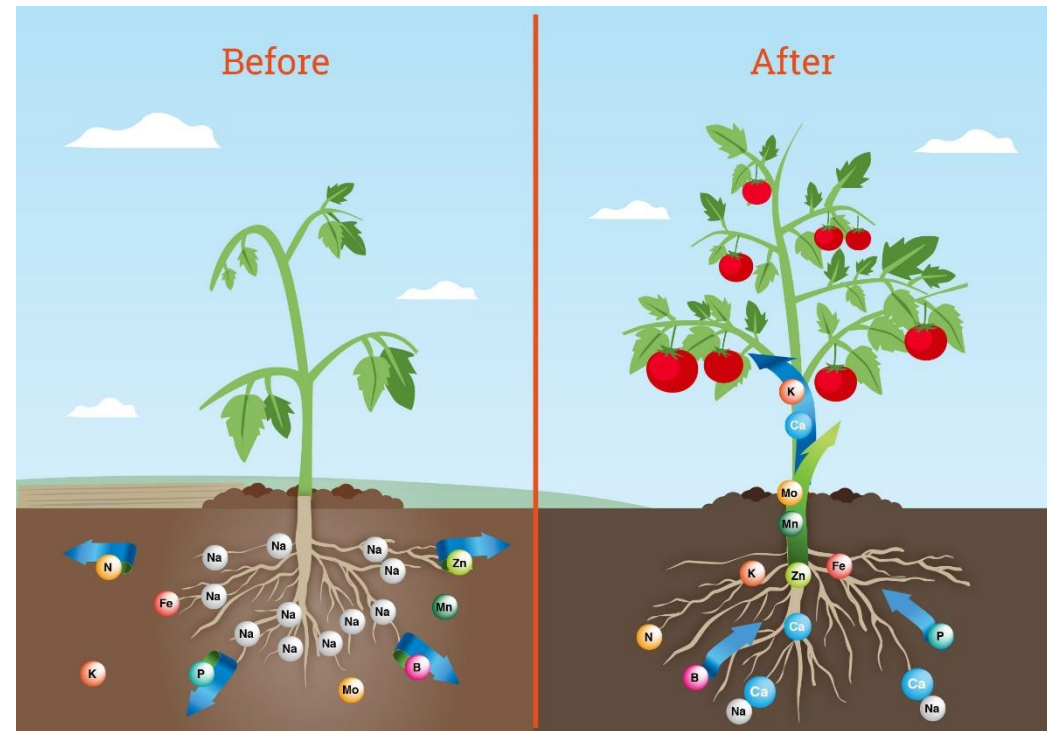
An excessive level of Sodium in the plant may lead to:

- **Hydric unbalance which will end up drying the plant.**
- **Leaves and fruit malformations.**
- **Delayed growth in the plants.**
- **Less size in the fruits and more percentage of leftovers.**

Saline Corrector

FERTIORGAN CALCIUM is an outstanding saline corrector of both soils and irrigation water due to the effect Calcium has on Sodium ions, element that damages soil structure and plants.

Calcium improves **Cationic Exchange Capacity** of the soil and displaces **Sodium** ions from the Clay-hummus complex, which are washed away by lixiviation.



Summarizing table

Element	Guaranteed Concentrations
Organic matter	30,0% w/w = 39,93% w/v
Calcium Oxide (CaO)	7,5% w/w = 10,1% w/v
Reducing sugars	8,0% w/w = 10,64% w/v
Sulphur (SO₃)	5,36% w/w = 7,05% w/v
Soluble liquid	---

Density: 1,34 gr/cc

pH (20°C): 3

Dosage and Application timing

Crop	Root application Liter/Hectare*	Number of applications/frequency
Citrus and subtropical	80-90 L/ha per crop cycle	From germination, repeat every 15-20 days, especially during pre-flowering and fruit formation
Fruit, olives and vines	80-90 L/ha per crop cycle	From germination, repeat every 15-20 days, especially during pre-flowering and fruit formation
Cereals and ornamentals	70-75 L/ha per crop cycle	From transplant, every 7-10 days

***Total Liters/Ha recommended after a series of individual application within indicated intervals.**



Dosage and Application timing

Crop	Root application Liter/Hectare*	Number of applications/frequency
Greenhouse	90-100 L/ha per crop cycle	From transplant, every 7-10 days
Field horticultural	80-90 L/ha per crop cycle	From transplant, every 7-10 days

***Total Liters/Ha recommended after a series of individual application within indicated intervals.**



Summary

- **Corrects Calcium deficiencies** with 100% complexed and assimilable Calcium.
- **Improves** physicochemical and biological traits of the soil due to the organic matter contained in the product.
- **Corrects water and soil salinity**, improving the Cationic Exchange capacity and displacing Sodium that harms its structure.

