

CALCIUM NITRATE

What is a Calcium Nitrate fertilizer?

Calcium Nitrate is a white granular soluble fertilizer that has two kinds of nutrients and that is easily absorbed by the plant. It contains 15,5% nitrogen (N) and 26,5% calcium oxide (CaO). 14% of nitrogen originates from nitrate (NO₃) and 15% of nitrogen originates from ammonium (NH₄). Calcium oxide that is completely soluble in water contains 19% calcium (Ca). Soluble calcium and nitrate nitrogen provides various advantages, which other fertilizers do not have, for the plants.

Where is it used?

Calcium nitrate fertilizer contains nitrate nitrogen and calcium, which are two major essential nutritious elements needed by the plants. It is the most appropriate choice for upper fertilizing for any kind of plantation, any kind of soil and every weather condition. As it provides calcium and nitrate together, it does not cause formation of remnants in the roots of plants. These two symbiotic acting does not cause high levels of electrolyte formation in the soil. Nitrogen in the form of nitrate elevates absorption of soluble calcium by the roots; thereby supports the supply of calcium to the plant.

Advantages of calcium nitrate as a fertilizer can be outlined in three headlines as given below:

- It contains nitrogen in the form of nitrates.

Nitrogen originating from nitrates is the preferred form for plants. Nitrate facilitates absorption of nutrients such as calcium. Especially in soil with clay may interfere with absorption of nitrogen coming from ammonium and indirectly prevents development of plants. On the other hand nitrate nitrogen is not bound by such types of soil. When plants are in need of nitrogen the roots can easily take nitrogen originating from nitrates from the soil. So nitrate nitrogen enables fast supply of nitrogen to the plants.

- Essential importance of calcium as a nutrient for plants

Calcium is a macro nutrient consumed in large amounts by plants. It forms the infrastructure of cell wall in plants. Calcium is usually found in soil in the form of compounds, which cannot be absorbed by plants. Circulation of calcium is generally low inside the plants. Calcium carbonates found in soil may not satisfy the needs of plants. Calcium carbonate has a low solubility. Due to the above mentioned reasons we need to use fertilizers containing calcium. Plants cannot grow without calcium. Calcium is one of the most consumed nutritious elements by plantations together with nitrogen and potassium.

- Benefits of calcium nitrate fertilizer for the soil

Calcium nitrate has refreshing effects on the soil as well as being a good nutrient for plants. It enables absorption of other nutrients that are bound clay minerals in soil. Clay particles may be pressed together in soil types, which contain too little calcium or too much sodium or which are being watered. As a result movement of water and oxygen is slowed down and plant growth is impaired. Water soluble calcium helps separation of clay particles and maintains porous structure of the soil.

Other advantages of calcium nitrate fertilizer are outlined as given below:

- Increases productivity and quality of products.
- Increases resistance to diseases and pests.
- Increases durability when the products are transported.
- Increases lifetime for storage of fruits.
- Facilitates calcium and nitrate absorption.
- Contains no additives or fillers.
- Will not evaporate, be washed away or cause burns.
- Will not cause an alkali soil.
- Will not increase the salts in soil.

Methods of application

Greenhouse type of calcium nitrate fertilizer has a high level of purity and is in uncoated granular form. It is easily soluble in water. It is applied to greenhouse and open field plants via leaves with sprinklers and rain-like watering systems. Especially when it is applied via sprinklers or rain-like watering systems it should be given alone, not with other fertilizers containing sulfur or phosphorus. It should not be mixed with pesticides.

Field type calcium nitrate on the other side is produced so as to be applied by hand or equipments. As it is coated, it takes longer time to dissolve. It is appropriate for upper fertilizing process for production in fields following plantation of the seeds. Calcium nitrate should be kept away from humidity and air.