



SYMBIO

# SYMBIO CALCIUM CARBONATE (CaCO<sub>3</sub>)

Ensure that soil nutrients remain plant available by balancing base saturation rates of the key soil nutrient cations

## BENEFITS

- Correct balance of calcium and ensures availability of other key nutrients
- Substantially reduce nitrate and phosphate inputs
- Reduce the quantity of inorganic fertilisers needed for healthy grass growth
- Low inorganic inputs help the development of a healthy soil food web for fine grass growth

Calcium is essential for strong plant cells and disease resistance in the plant. It is also the main component of the base cations and should make up at least 65% of the cations in the soil so the soil is kept open for air and water transfer and microbial growth. Too little calcium reduces nitrification and phosphate uptake.

### Symbio calcium carbonate

is a greens grade slow release source of calcium. The greens grade granules do not easily leach.

**Application guide:** \*For best results consult your Symbio representative.

J	F	M	A	M	J	J	A	S	O	N	D

**PACK  
SIZE:  
25kg**

### Application

50-100g/m<sup>2</sup> at any time of year. Mix with top dressing or apply by itself - brush into tine holes after aeration

### Symbio calcium carbonate (CaCO<sub>3</sub>)

Apply on soils with a pH <5.5

For best results your soil should be analysed for all nutrients, organic matter, cation exchange capacity and conductivity.

Your Symbio technical advisor will arrange for your rootzones to be analysed and the results interpreted.

**50-100g/m<sup>2</sup>**

**pH: 8.5 -9.5**

**0.5-1.5mm**

**CONTACT US TODAY:**

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# BASE SATURATION: Ca, Mg, K

## Technical Information

Calcium, Magnesium and Potassium are key soil nutrients and are essential to maintaining soil structure, soil pH and nutrient availability. A balanced soil chemistry is key to plant growth. Soil lacking in these minerals can result in poor growth and wasted fertiliser application.

High Sodium levels in the soil cause plant wilt. Potassium protects cell walls, and therefore levels of potassium need to be higher than sodium to protect plants from wilt. Soluble calcium is also able to displace sodium from soil.

However, calcium deficiency often occurs in sports turf, where sand is the key component in the rootzone. The situation is exacerbated when irrigation water is high in bicarbonates. The negative charges in the bicarbonate tie up the calcium making it unavailable to plants.

A soil test can be used to determine concentration of key soil nutrients and correct imbalances, to ensure that nutrients remain plant available. If nutrients can't be utilised by the plants then fertiliser applications will be expensive and will not produce the desired results.

High sodium levels in soils destroy soil structure, impact soil pH, and make nutrients less available. Soluble calcium reduces sodium levels, flocculates soil improving structure and keeps nutrients available for plants.

### SYMBIO Gypsum, Calcium Carbonate and Kieserite

can be used to improve soil chemistry and ensure that rootzones support healthy plant growth. For best results consult your Symbio advisor who will complete a soil test and provide recommendations on how to correct and balance your soil chemistry.

### Base saturation rates - Approx. % Ratios (for TURF)

Calcium (Ca <sup>2+</sup> )	Magnesium (Mg <sup>2+</sup> )	Potassium (K <sup>+</sup> )	Sodium (Na <sup>+</sup> )	Hydrogen (H <sup>+</sup> )	Others
68%	12%	5%	<2%	10%	3%

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