Organic Mined
Agricultural Gypsum

CalciSoil

www.everbrighttr.com

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Product Catalogue

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Ever Bright Global
General Trading LLC

CalciSoil

ABOUT US

CalciSoil® is a naturally occurring mineral fertilizer brand headquartered in United Arab Emirates. CalciSoil is not just our brand; It is a commitment to producing the purest, healthiest products.

Our company, Ever Bright Global General Trading, is a family-run business found by Ali Roeyn in 1982 with the aim of manufacturing gypsum-based environmentally sustainable fertilizers from purest gypsum rocks and improving the lives of 6 billion people while serving our global community.

The secret of our success has been: perseverance, continuous research and development, and a strong passion for excellence as per the founder's motto: "We can do it and nothing is impossible".

1100 MT/Day Production Capacity

Over 300 Skilled Personnel

Over 38 Years Of Experience

3 Production Lines

QUALITY ASSURED BS EN ISO 9001 — QUAY AUDIT LTD — SCB A — ASCB Accreditation Services Worldwide

ISO 9001 2015 CERTIFIED

CalciSoil

CalciSoil® mined agricultural gypsum

CalciSoil® is a naturally occurring mineral fertilizer derived from ocean deposits formed centuries ago. CalciSoil® performs in all three categories of soil treatment: an amendment, conditioner, and fertilizer. It improves physical and chemical properties of soil while its calcium and sulfur content provides essential nutrients for plants which ultimately results in improved overall plant growth and higher crop yield. Being moderately soluble, CalciSoil® is a natural controlled release fertilizer that feeds plants over many months with no adverse effect on human, animals and environment. It is also used as a raw material for the manufacture of fertilizers.

Chemical name and formula:

Calcium Sulfate Dihydrate ($CaSO_4.2H_2O$)
CAS No. : 13397245

Appearance: off-white fine powder

Guaranteed Analysis

Purity ($CaSO_4.2H_2O$)	**95.5 %**
Calcium (Ca)	**23 %**
Sulfur (S)	**18 %**
Moisture	**0.5 max**

Usage:

For use in general agriculture, horticulture, and gardening; on golf course, lawn and in landscape applications.

Major functions and benefits:

-Loosens heavy clay soils
-Improves soil aeration and water infiltration
-Corrects sulfur deficiency & nourishes plant with calcium
-Remediates saline soils
-Reduces aluminum toxicity
-Reduces phosphorous runoff

Advantages:

+Economic
+Moisture-free
+Neutral pH
+Sparingly soluble
+Environmentally safe
+Easy to spread
+Slow-release
+Highly pure

Chemical & Physical Properties

Parameter	Unit	Value
pH	-	6.7
Crystal Water (CW)	%	20.3
Solubility	g/L	2.1
Electrical Conductivity (EC)	mho/cm	1630
Ca^{++}/Mg^{++} ratio	%	8.35
Total Lime ($CaCO^3$)	%	2.2
Mean Particle Diameter	Micron(µm)	64

Sieve Analysis

% Passing – 4 Mesh	100 %
% Passing – 8 Mesh	100 %
% Passing – 16 Mesh	99.98 %
% Passing – 30 Mesh	99.91 %
% Passing – 50 Mesh	99.48 %
% Passing – 100 Mesh	95.24 %

The particle size can be adjusted to meet specific requirements.

Storage:

Keep in dry place away from moisture.

100% RECYCLABLE

Packaging:

25, 30, 35, 40 KG bags

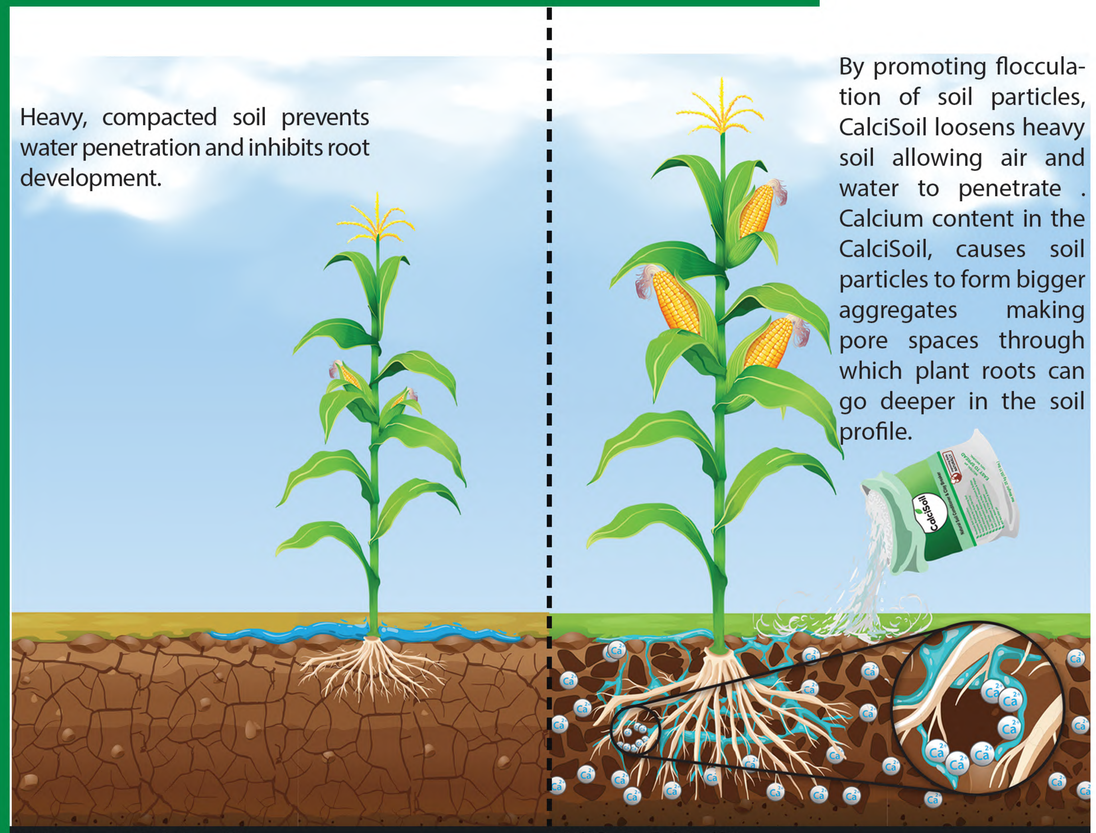
1350 KG jumbo bag

Crop-specific Application Rate

Rice	2000 kg/ha
Wheat	8000 kg/ha
Sugarcane	5000 kg/ha
Potatoes & tuber crop	3000 kg/ha
Corn and maize	6000 kg/ha
Soybeans	170 kg/ha
Oil palm	2-5 kg/plant
Onion	45 kg/ha
Coconut	2-5 kg/plant
Tomato	6900 kg/ha
Leafy vegetables	1000 kg/ha
Legumes	1700 kg/ha
Citrus fruits	1200 kg/ha
Banana	2 kg/plant
Mango	5000 kg/ha
Pineapple	1500-3000 kg/ha
Berries	500-1000 kg/ha
Peanut	1000 kg/ha

The above-mentioned application rates are supported by research papers.

1 Product Benefits



CalciSoil® loosens heavy clays improving water infiltration and soil aeration

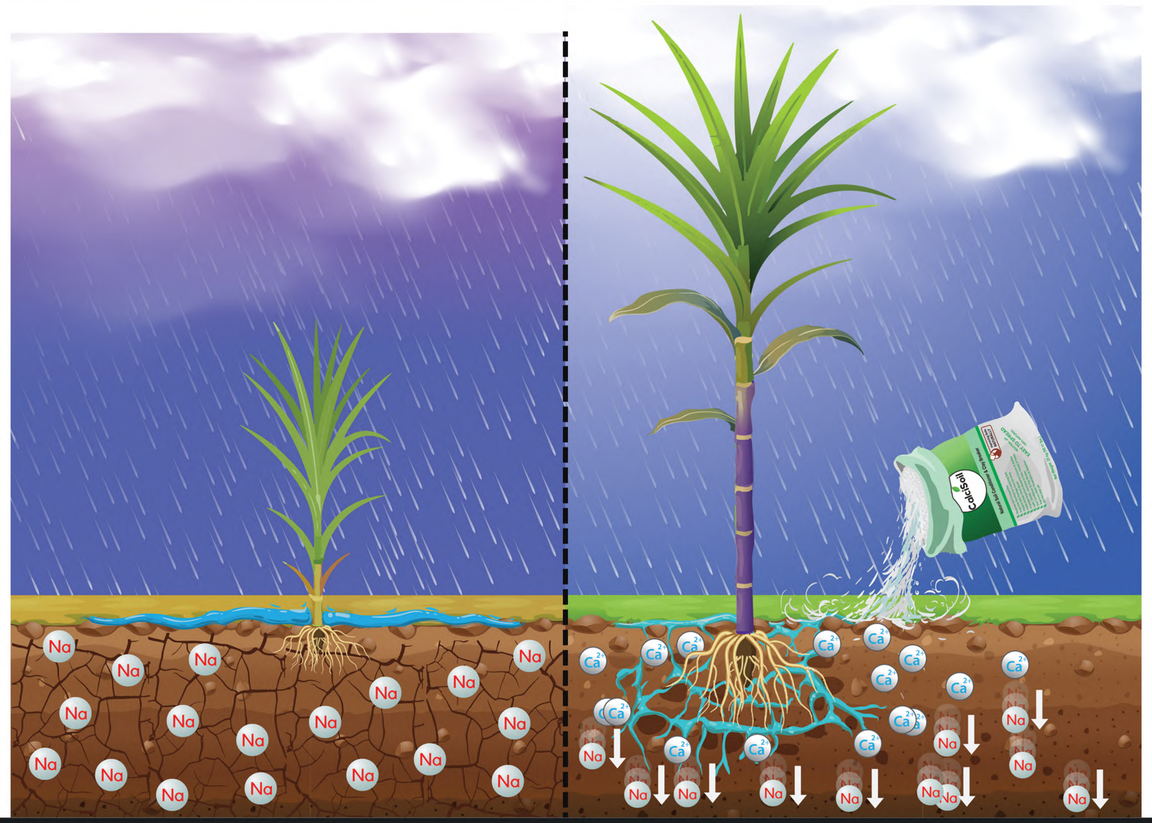
CalciSoil® which is calcium sulfate improves soil structure. Commonly known as clay-breaker, gypsum promotes flocculation of dispersed clay particles into bigger aggregates making pore spaces that let water and oxygen slide through. Studies reveal that by applying gypsum there will be a 10^3 increase in water infiltration rate which leads to deeper and stronger rooting.

2 Product Benefits

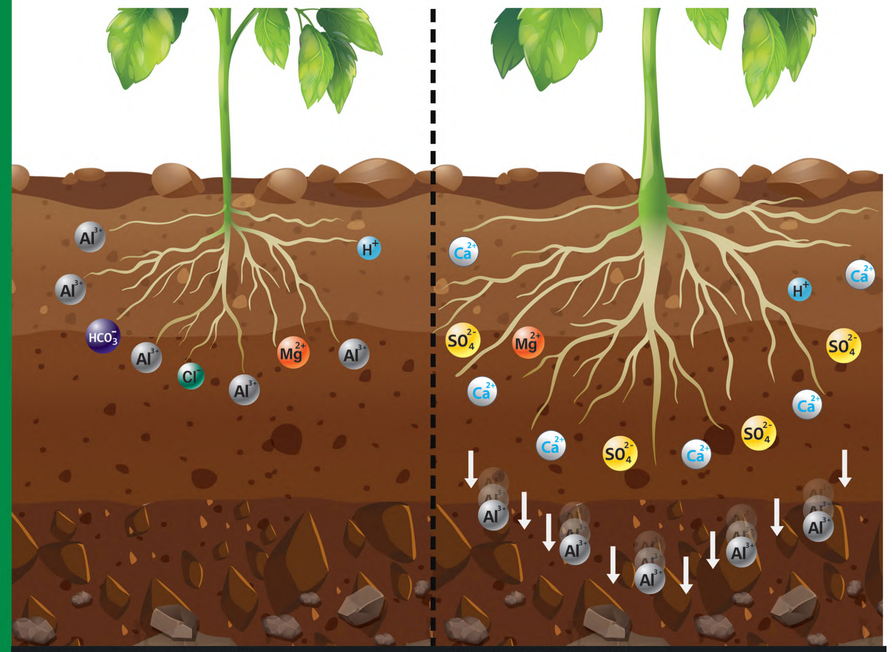
Poor soil structure can be associated with high concentrations of sodium in the soil, compared to calcium. When soils with high exchangeable sodium are wet, the clay particles disperse, and the soil loses its defined structure resulting in lower water infiltration as well as reduced seedling emergence.

CalciSoil® improves soil structure by displacing Na (sodium) on the surface of clay particles with Ca (calcium).

CalciSoil®, made of calcium sulphate is moderately soluble, but the sodium sulphates that form in the soil solution are very soluble. Rainfall or irrigation is required to leach these soluble salts out of the topsoil deeper into the soil profile, away from zone in which crop roots will be growing.



3 Product Benefits



Aluminum (Al) toxicity is a major constraint for crop production in acidic soil worldwide. When the soil pH is lower than 5, Al^{3+} is released to the soil and enters into root tip cell and stops root development of plant. The target of Al toxicity is the root tip, in which Al exposure causes inhibition of cell elongation and cell division, leading to root stunting as well as reduced water and nutrient uptake.

CalciSoil®, which is calcium sulfate, won't raise the soil pH, but the high volume of calcium will displace the aluminum on subsoil particles; this allows it to be leached below the rooting depths when enough moisture is available. As a result, plants are able to send roots deeper. Lime can do the same in the topsoil but not the subsoil.

Also the sulfate ions SO_4^{2-} from CalciSoil® reacts with the aluminum fixing it from being plant available. Sulfate reacts with aluminum causing "solid" aluminum sulfate $Al_2(SO4)_3$ to precipitate in the soil thus significantly decreasing the amount of aluminum available to plants.

4 Product Benefits

CalciSoil® corrects sulfur deficiency & nourishes plant with calcium

Calcium and sulfur constitute secondary plant nutrients along with magnesium. CalciSoil®, having 23% calcium and 18 % sulfur is an organic controlled release fertilizer that nourishes plant over many months while increasing overall plant growth and crop yield. A deficiency in a secondary nutrient is just as detrimental as a deficiency in nitrogen, phosphorus or potassium.

Calcium is essential for most nutrients to be absorbed by plants roots. Without adequate calcium, uptake mechanisms would fail. Calcium also helps stimulate root growth.

CalciSoil® also contains sulfate which is the most absorbable form of sulfur taken up by plant roots. The sulfur in CalciSoil®is readily available, so it can also be used where a quick response to sulfur is required.

5 Product Benefits

CalciSoil® traps phosphate on the surface

CalciSoil® can trap phosphate on the surface because it is soluble and dissolves into its calcium and sulfate salts. The free calcium attaches to surface applied phosphate to form calcium phosphate. CalciSoil®, containing 23% calcium, increases ionic strength of soil causing better phosphorous retention capacity by soil particles. It also lowers phosphorous concentration in soil solution which results in less leaching. These soil particles are larger aggregates which are less easily removed by water.

Phosphorus runoff is causing harmful algae that deplete waterways of oxygen, resulting in dead zones that damage ecosystems vital for aquatic life.

Extra Benefits of CalciSoil®

6. The application of CalciSoil® in soils, increases the sorption activity of ca^{2+} and (so_4^{2-}) by plants, and results in improvement of nitrogen (n) uptake.
7. Adds to the value of organic amendments. Blends of CalciSoil® and organics increase the value of other soil amendments, especially for improvement of soil structure.
8. Decreases and prevents the crust formation on soil surfaces which result from rain drops or from sprinkler irrigation on unstable soil.
9. Protects against excess water runoff from especially large storms that are accompanied with erosion.
10. Reduces surface sealing and increases infiltration as well as improving internal soil drainage.
11. Increases water-use efficiency of crops which is of particular importance in areas and times of drought.
12. Soils that have been treated with CalciSoil® have a wider range of soil moisture levels where it is safe to till without danger of compaction.
13. Acts as a natural mulch by adhering the soil particles and protecting them against degradation by wind erosive forces.
14. Decreases the bulk density of soil by increasing water stable aggregates and the volume of soil pores.
15. Makes water-soluble polymer soil conditioners more effective; calcium which comes from gypsum, is the mechanism for binding of the water-soluble polymers to the clay in soil.
16. It is preferred over lime for potatoes grown in acid soils so that scab may be controlled.
17. It is used for peanuts, which develop below ground, to keep them disease free.
18. Helps prevent blossom-end root of watermelon and tomatoes and bitter pit in apples.

CalciSoil

Quality Assurance

Our company is vertically integrated to be in complete control of all materials and processes responsible for the production of our products. To be sure consistency is maintained, we continuously sample and analyze for purity, moisture, particle size, and sodium (Na).

Material Safety Data Sheet

The MSDS of CalciSoil® is available online and may be obtained directly through our website (www.everbrighttr.com) or by email upon customer's request.

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