



**PRODUCT INFO
& DATASHEET**

SICOMARE 'SOILBUILDER' COMPOSTED SEAWEED

*A concentrated humus to create soil-structure and boost plant growth
Granules*

'SICOMARE SOILBUILDER' provides an immediate food source to stimulate bacterial and fungal life:

1. Contains all essential trace elements. All nutrients quickly available to the plant.
2. Builds soil structure.
3. Encourages soil flora and fauna.
4. Enhances water retention.
5. Reduces fertiliser leaching.
6. Improves plant health and resilience.
7. Increases leaf chlorophyll.

How 'SICOMARE SOILBUILDER' works in the soil

Following cultivation into soil the SICOMARE granules come into contact with soil water where alginate liquid is drawn out of the granules and migrates into and around the soil particles. The natural soil chemicals then react with the alginate liquid, changing its molecular structure into a gel. This gel called alginate contains the properties that 'SICOMARE SOILBUILDER' is famous for and which act in the soil as follows:

1/ CONTAINS ALL ESSENTIAL TRACE ELEMENTS

In the natural cycle of things seaweed is very good at absorbing trace elements and nutrients washed from the land into the sea. The following typical analysis of 'SICOMARE SOILBUILDER' illustrates this:

Typical Analysis:

Nitrogen (N)	2.34%	Copper (Cu)	6 mg/kg
Phosphorus (P)	0.11%	Molybdenum (Mo)	1 mg/kg
Potassium (K)	6.76%	pH	9.4
Calcium (Ca)	1.39%	Conductivity	9,900 µS/20°C
Sodium (Na)	2.34%	Alginate released	15.8%
Sulphur (S)	2.30%	Sheer strength (Pa)	0.770
Iron (Fe)	837.5 mg/kg	Viscosity (Pas)	0.2865
Zinc (Zn)	27 mg/kg	Aminobutyric acid betaine	5.81 mg/kg
Boron (B)	20 mg/kg	Aminovaleric acid betaine	2.88 mg/kg
Manganese (Mn)	70.3 mg/kg	Glycinebetaine	6.20 mg/kg

'SICOMARE SOILBUILDER' is quickly available for the plants (contrary to other unprocessed or even processed seaweedmeal which is slow release).

2/ BUILDS SOIL STRUCTURE

A healthy soil in natural terms is a living soil possessing free gaseous exchange and water drainage properties, which allows the micro and macro organisms and soil fungi to thrive.

Alginate is known to restructure soils in different ways - it flocculates clays by electrolysis and aggregates sandy soils by gelling free particles into a crumb structure.



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3/ ENCOURAGES FLORA AND FAUNA

Following the soil restructuring mentioned above comes the work of the living organisms, the fungus and microorganisms. Soil bacteria and fungi are both stimulated and feed off free alginate gel increasing their numbers to work on structuring the soil. Macro-organisms such as worms, beetles, millipedes etc. follow to complete the cycle of turning a subsoil or poor topsoil into a loam.

A good topsoil laid over an area of an acre six inches deep will yield approximately 4 tons of living organisms in the form of bacteria, fungi, protozoa, nematodes and macro-organisms.

4. ENHANCES WATER RETENTION

The alginate gel is capable of absorbing a considerable amount of water, like small reservoirs it holds liquid which plants can use when the moisture levels drop. Its water holding capabilities do not impede the free flow or drainage of water.

5. REDUCES APPLIED FERTILISER LEACHING

The small gel reservoirs of liquid trap nutrients and hold them for longer. Preliminary trials to date indicate that phosphorus and potassium leach out before nitrogen and that 51% more of the nitrogen was retained than the control over the 22-day trial period.

6. IMPROVES PLANT HEALTH AND RESILIENCE

Apart from containing growth hormones such as Cytokinins and Gibberelins, *Ascophyllum nodosum*, the seaweed variety 'SICO-MARE SOILBUILDER' use, also contains a chemical called betaine. Professor Blunden of Portsmouth University who isolated the chemical lightly refers to betaine as a plant stress reliever. Research work shows it does give the plant certain advantages in seed germination rate,

7. INCREASES LEAF CHLOROPHYLL

The chemical betaine also increases the volume of chlorophyll in plants. This converts to carbohydrates during photosynthesis, which aids the growth and well being of the plant.

NOTE: BIG ADVANTAGE OF "SICOMARE SOILBUILDER COMPOSED SEAWEED" over other (un)processed seaweed meals. Unprocessed or even processed seaweed meal, which does not release free alginate into the soil by way of moisture, will not and cannot be expected to work in the same way described above. The alginate liquid, the protoplasm of the seaweed cells, holds the key to unlock these advantages. If it can't get through the thick cellulose structure of the cell walls, like fresh farm-yard manure, it does very little good for your soil and can in certain circumstances be counter productive.