BRANDT Seaweed Max

Unique Liquid Seaweed Extract

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A unique combination of North Atlantic seaweed concentrate

Why Seaweed for Turf?

The chemistry of seaweed (*Ascophyllum nodosum*) is complex. It has a very high content of organic carbon (particularly carbohydrates such as alginic acid, laminaran and mannitol), but yet very low in NPK, making it an excellent and highly flexible addition to a turf nutritional program as no allowances need to be made for NPK content.

North Atlantic Seaweed is well known for its trace mineral content and the presence of a range of biologically active, growth promoting substances.

How Seaweed Max does the Work for Turf Management

Naturally occurring compounds in BRANDT Seaweed Max, include both cytokinins and auxins as well as high concentrations of amino acids.

Cytokinins plant hormones are active in promoting cell division, shoot development and are also involved in cell growth, differentiation, and other physiological processes.

Auxins are a class of substances often called phytohormones. Auxins play an essential role in coordination of many growth and behavioral processes in the plant life cycle and are often used to initiate root growth and uniform flowering. On the cellular level, auxins are essential for cell growth, affecting both cell division and cellular expansion.

Cytokinin and Auxin Compounds Presented in BRANDT Seaweed Max Assist in:

- Stress resistance
- Cell division
- Cell differentiation (shoot, root or flower initiation)
- Enhancement of uptake across living membranes

Amino Acids from Seaweed

Contained in the North Atlantic seaweed concentrate in BRANDT Seaweed Max are the following amino acids and some of their plant active functions:

Root development: Methionine and arginine

Resistance to stress conditions: Proline, valine, serine, lysine, glutamic acid and cysteine

Nitrogen reserve: Glutamine, asparagine, aspartic acid, glutamic acid, arginine and proline

Hormone precursors: Tryptophan and methionine

Color Development: Phenylalanine

Increase of germination rate: Proline and glutamic acid

Photosynthesis and chlorophyll reinforcement: Alanine, glycine, lysine, glutamic acid and proline

Complexing capacity: Glycine, glutamic acid and aspartic acid

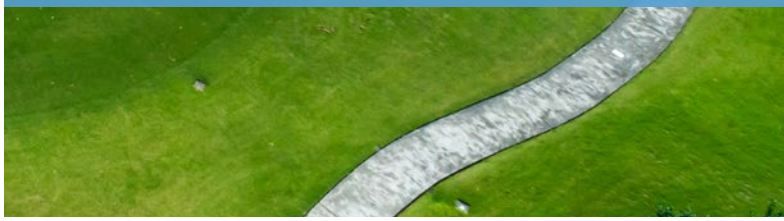
Stomatal opening: Alanine, glutamic acid, lysine, proline and methionine

Antioxidant capacity: Histidine, cysteine, tryptophan, lysine, methionine and threonin

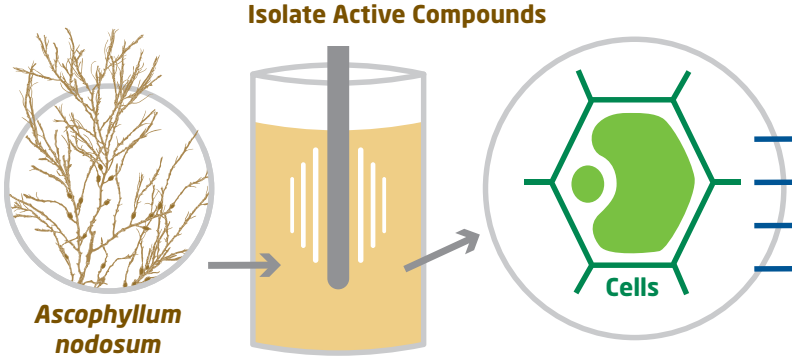
Observable results using BRANDT Seaweed Max:

- Increased root mass
- New root and shoot formation
- Enhanced uptake of nutrients into both roots and leaves
- Resistance to disease and pests

Promotes early season root growth and enhances the establishment of overseed by stimulating photosynthesis and increasing microbial activity.



Extraction Process Tailored to Isolate Active Compounds



Ascophyllum nodosum

Active Compounds Extracted

- **Mannitol** (15,000-20,000 ppm)
- **Betaines** (10,000-20,000 ppm)
- **Organic & Amino Acids** (35,000-45,000 ppm)
- **Polysaccharides & Glucosides** (10,000-20,000 ppm)

Guaranteed Analysis and Directions for Use

BRANDT Seaweed Max

0-0-2

Derived from: Kelp Extract (*Ascophyllum nodosum* and Potassium Hydroxide*)
* Potassium Hydroxide as an extraction agent.
This product is not intended for use on food crop sites.

Rate Recommendations

For professional use, apply every 7-14 days, as needed.

Putting Greens and Tees, Fairways, Sports Turf and Lawns

Maintenance: 1.5-3 fl. oz. per 1,000 sq ft or 0.5-1 gallons per acre every 7 to 14 days as needed.

Overseeding: 2-4 fl. oz. per 1,000 sq ft or 0.75-1.25 gallons per acre, applied every 7 to 21 days after germination and plants have reached the 3 tiller phase. Most effective when used as part of an overall overseeding nutritional program.

Ornamental Plants:

Apply 1-2 fl. oz. per 1 gallon of water as a foliar spray every 7 to 14 days, as needed.

Tree and shrub maintenance: For deep root feeding inject 1 gallon per 100 gallons of water per inch of trunk diameter at chest height. Apply 1-2 gallons per 100 gallons of water as a drench. Apply drench throughout the year or during drought stress conditions.

Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year and plant species.

Literature Cited
1) R.E. Schmidt, Ph.D.; E.H. Ervin, Ph.D.; and Xunzhong Zhang, Ph.D. Questions and answers about biostimulants.
2) R.E. Schmidt, Ph.D. and Xunzhong Zhang, Ph.D. How Humic substances help turfgrass grow.
3) O'Donnell, R.W. The auxin-like effects of humic preparations from Leonardite.
4) T.L. Senn Ph.D. Seaweed and Plant Growth

Brandt Consolidated, Inc.
www.brandt.co

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