BRANDT®

Plant Growth Energizer/Turf Formula

Brandt Seaweed Max

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A unique combination of North Atlantic seaweed concentrate and humic acid

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.

What are the growth promoters, and how do they work for turf management?

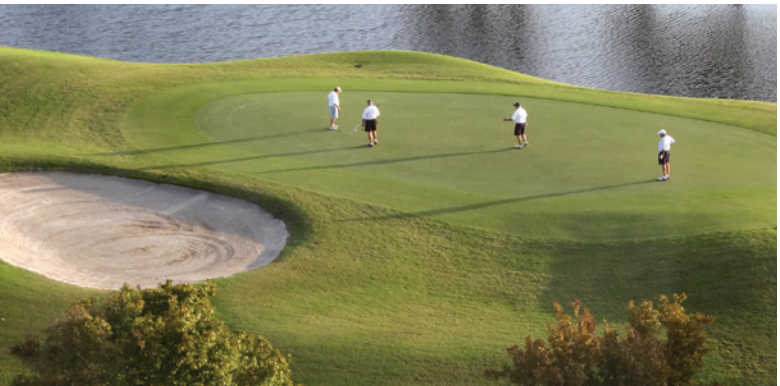
Naturally occurring compounds that function as growth promoters in BRANDT SEAWEED MAX, include both cytokinins and auxins as well as high concentrations of amino acids.

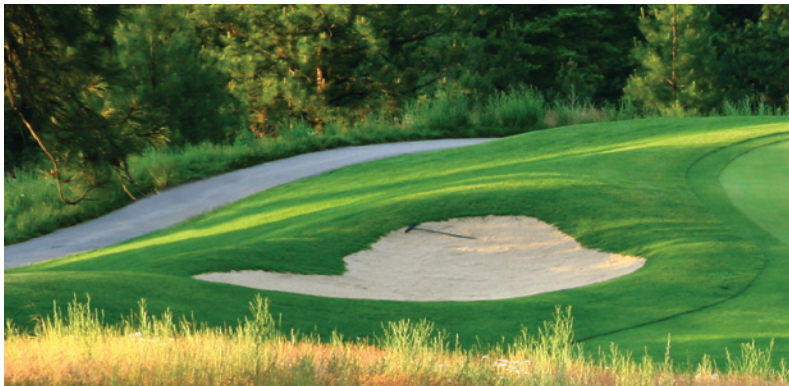
Cytokinins are a class of plant growth substances (plant hormones) active in promoting cell division, shoot development and are also involved in cell growth, differentiation, and other physiological processes.

Auxins are a class of plant growth 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 promote initiation of 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 present in BRANDT SEAWEED MAX promote:

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





BRANDT SEAWEED MAX

Releases locked up soil nutrients and improves drought and disease resistance. BRANDT SEAWEED MAX promotes early season root growth and enhances the establishment of overseed by stimulating photosynthesis and increasing microbial activity.

Observable results using BRANDT SEAWEED MAX:

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

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 threonine

Humic Component

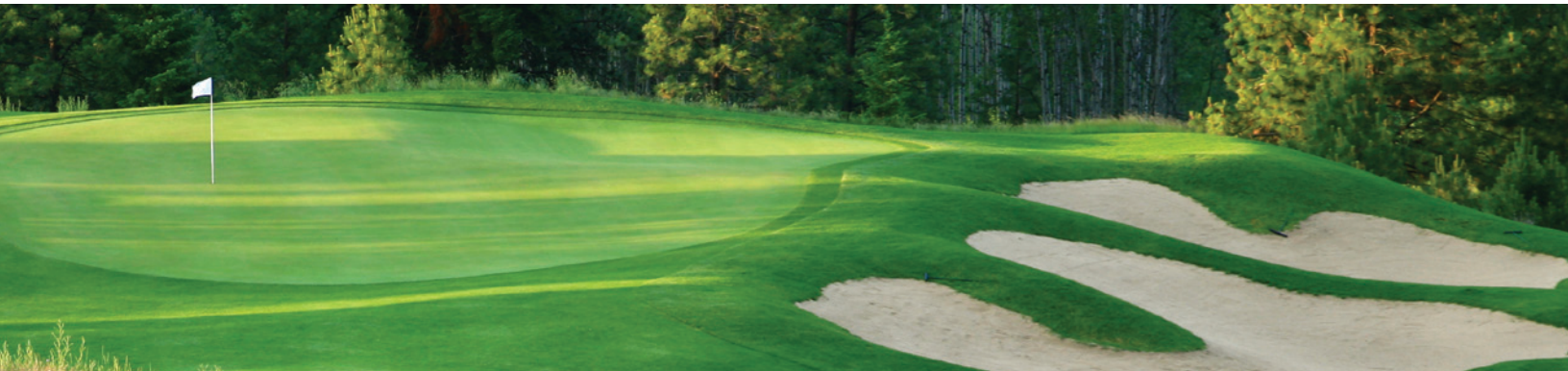
BRANDT SEAWEED MAX also contains our Uptake brand of humic matter, derived from North Dakota leonardite. Humic matter or "humates" are a major constituent of soils, which occur in almost all terrestrial and aquatic environments formed from the chemical and biological degradation of plant and animal residue and from the activities of microorganisms.

Humates function by increasing the water-holding capacity of the soil, making treated soils more drought resistant. Humates also tend to increase soil particle aggregation and consequently provide better soil aeration and workability.

Humates also play a role in the management of excessive sodium. It can reduce salt damage by buffering sodium excesses while simultaneously solubilizing those excesses to help remove them from the scene.

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 Seaweed Max

Directions for Use

BRANDT SEAWEED MAX is best used as part of a complete turf nutritional program.

Frequent, low rate applications:

Spray Application
Apply 1.5-3 ounces BRANDT SEAWEED MAX per 1000 sq. ft. or 2-4 quarts per acre per month during the growing season. Total minimum seasonal rates of 20 quarts per acre should be applied for highly stressed areas.

Fertigation
Inject into irrigation at 1.5-3 ounces BRANDT SEAWEED MAX per 1000 sq. ft. or 1-2 gallons per acre 3-6 times during the growing season.

Deep Root Injections
Apply 2-4 quarts BRANDT SEAWEED MAX per 10 gallons of injection solution.

NON-PLANT FOOD INGREDIENTS

25.0%	Seaweed Extract derived from *Ascophyllum Nodosum*
1.0%	Humic Acid derived from Leonardite

Purpose: Soil amendment.

Mixing Instructions
Put 1/3 of water in tank. Add correct amount of BRANDT SEAWEED MAX to water first while agitating. Add other products at their appropriate rate. Fill tank with balance of water to desired volume. Agitate adequately to mix. Caution: Check compatibility with standard jar test before use.

Tank Mixing
When tank mixing BRANDT SEAWEED MAX with other products, always take care to jar or bucket test the proposed mixture before adding in large quantity to the spray tank.

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