



## *The tide just rose for healthier, more stress tolerant turf.*

Bio-MAX® 4-0-0 contains 52% North Atlantic kelp extract and fulvic acid, two recognized turf biostimulants. Studies have shown the combination of seaweed and fulvic acid provides greater turf benefits than either biostimulant component individually.

Bio-MAX® also contains a wide range of other important elements that contribute to the vitality and vigor of your turf.



### Features of Bio-MAX® 4-0-0:

- 52% cold-processed seaplant extract (*Ascophyllum nodosum*) and fulvic acid
- High levels of cytokinins
- 17 natural plant-based amino acids

### Benefits of High-Cytokinin Seaplant Extract:

- Improves photosynthetic capacity
- Reduces susceptibility to diseases
- Improves stress tolerance
- Increases root mass
- Increases turf density

### The Role of Cytokinins

Cytokinin is a hormone responsible for cell division and root growth. Because of the high level of cytokinins in *Ascophyllum nodosum*, supplementing turf fertilization programs with seaplant extract has been shown in independent university research to provide many benefits.

# ▶ TECH SPECS

## HARRELL'S BIO-MAX®

Powered by biostimulants to promote stress tolerance, photosynthesis and root development.

### SEAPLANT EXTRACT

Cytokinin is the growth hormone responsible for cell division and root growth. Because of the extremely high level of cytokinins in *Ascophyllum nodosum* seaplant extract, supplementing turf with seaplant extract has been shown in independent university research to stimulate production of antioxidants in plant cells and promote the activity of the important antioxidant enzyme, superoxide dismutase. The overall result is a boosted immune system for the turf and some peace of mind for the turfgrass manager.

### FULVIC ACID

Fulvic acid is an important biostimulant that contributes to plant health, physiological fitness and stress tolerance by enhancing the availability of nutrients, vitamins, coenzymes, and auxins. By enhancing plant metabolism they can help make turf more stress tolerant and disease resistant. Fulvic acid also increases the amount of carbohydrates in the plant. More carbohydrates means more energy and reserves.

### HUMIC ACID

Soluble Humic Acid is an excellent source of auxins that promote root growth, and, as a chelating agent, it increases micronutrient availability.

## HARRELL'S BIO-MAX® 4-0-0

**Bio-MAX® 4-0-0** provides the perfect foundation for a complete foliar and liquid nutritional program.

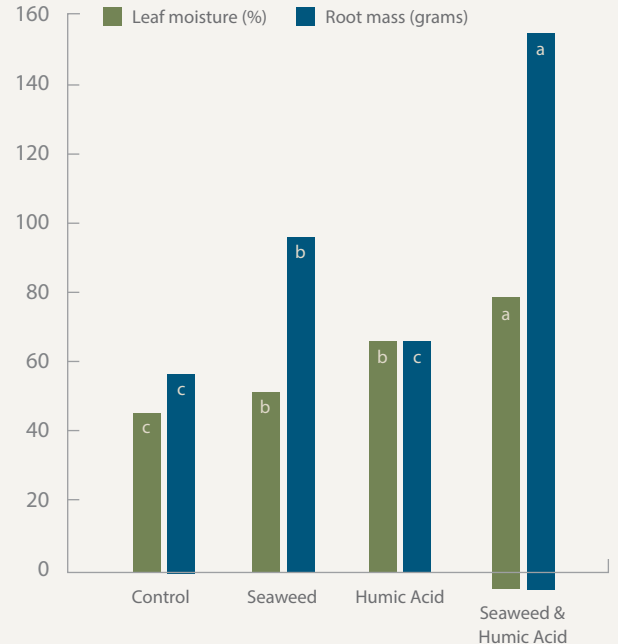
**Bio-MAX® 4-0-0** tank-mixes safely with other liquid nutritionals, PGRs and most fungicides.

**Bio-MAX® 4-0-0** combines two proven biostimulants. Research at Virginia Tech has shown that combining seaplant extract with humic acids provides better results than either biostimulant by itself.

**Bio-MAX® 4-0-0** contains a wide range of naturally occurring plant hormones plus N, Fe, Mn which are essential for plant health and productivity.

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### SEAWEED AND HUMIC ACID ON PENNCROSS



Columns with different letters are significantly different from each other (Graph from Zhang & Schmidt 2003)

R.E. Schmidt, Ph.D.; E.H. Ervin, Ph.D.; and Xunzhong Zhang, Ph.D. "Questions and Answers About Biostimulants" GCM, June 2003 91-94. Print.

 **Harrell's**  
Growing a Better World®