

## Algae Micronutrients and Plant Growth Stimulants

### Advantages of Brown Algae

- Provide Proteins, Amino Acids, Vitamins and Minerals
- Content of N, P, K, Ca, Fe, Mg, Zn, Na, S
- Abiotic stress tolerance is increased in vegetable cultures by natural betaines such as glycine betaine or laminin
- Content of natural sugar alcohol Mannitol and Phenol
- Nitrogen assimilation is improved
- Support of formation of useful microorganisms, esp. mycorrhiza or rhizobia

### Mechanism of Brown Algae

- Brown algae contain antioxidants and flavonoids to reduce stress in UV light
- Gene expression promotes nitrogen and auxin transport and thus the growth of lateral roots
- Phytohormone-like effects via auxin indole-3 acetic acid support plant growth
- Increased amylase activity
- Increase in salt tolerance in individual cases
- Improved biogenesis of chloroplasts help to increase the chlorophyll content



### Four kinds of brown algae offered by JRS

#### *Macrocystis Pyrifera:*

- contains Potassium Iodide
- soil additive for Soybean, Corn, Wheat and Sorghum crops among other

#### *Ecklonia Maxima:*

- contains antioxidants, 9-11 % Protein, 3 -7 % Kalium, 1 -6 % Calcium, 8500 ppm Amino acid Tyrosin, Phytohormons ( Auxine, Cytokinine)
- improves the quality and taste of vegetables, herbs and microgreens

#### *Ascophyllum Nodosum:*

- supports plant growth and colonization of roots with symbiotic spores
- supports Rhizobacteria Sinorhizobium melitoli to increase fixation of nitrogen for Alfalfa

#### *Durvillea Antarctica:*

- Soil additive, contains about 30 % Alginic Acid
- Water Storage by stable Honeycomb Structure
- Food Status (Chile)

### Product description & Dosage

- Dry powder
- Recommended quantity 0.2 - 3.0 wt .-% of plant substrate
- Swellable and water-storing
- Humidity below 12%, free of germs and mold

Contact us for more information and find out about further JRS products for Plant Cultivation.

[www.jrs.de](http://www.jrs.de)

WORLDWIDE HEADQUARTERS

Business Unit Technics  
73494 Rosenberg (Germany)  
Phone: +49 7967 152-414  
[technik@jrs.de](mailto:technik@jrs.de)