

# SEAWEED EXTRACT

## Agriculture • Horticulture

- Liquid Organic Kelp • 100% Natural • Foliar or Soil Drench



- Stimulates a vigorous root system
- Enhances color & quality of fruits and vegetables
- Promotes dark green foliage with no top growth
- Reduces transplant shock
- Faster seed germination
- Stimulates Plant Resistance (SAR) Response

**Cold water processed to preserve natural occurring**

- Plant Growth Hormones
- Over 56 Trace Elements
- Amino Acids
- Carbohydrates

**SEAWEED EXTRACT**  
*Ascophyllum nodosum*

GROW MORE first introduced Seaweed Extract into the California market place in 1992 and now is established in over 30 countries worldwide.



From an academic point of view a large body of literature developed over the last 50 years from numerous global scientific studies support the use of seaweeds and seaweed extracts in agricultural and horticultural crop management program.

The efficacy of GROW MORE Seaweed Extract as a cost effective crop input under differing climactic and geographic conditions and on a wide variety of crops has been proven in the many field trial results that have shown significant improvements in overall yields and quality of fruits and vegetables.

## PRODUCTION PROCESS

The GROW MORE process utilizes an off patent cold process, that makes the use of heat and chemicals unnecessary, thereby preserving the sensitive vitamins, phytohormones, auxins, cytokinins and natural growth stimulants in their active form.



*Ascophyllum nodosum* extract is considered to be the superlative choice for agricultural or horticultural use. Our extract contains over 60 nutrients N-P-K, secondary, micronutrients, amino acids, cytokinins, Indole - I.A.A. with gibberellin like activity, anti-oxidants, and growth promoting auxins.

Growth promoters found in Seaweed Extract and confirmed by gas chromatography are cytokinins; adenine (6-aminopurine), zeatin (6-furfurylamino-purine), kinetin riboside, dihydrozeatin, and approximately 12 to 14 other naturally occurring growth promoting compounds. These compounds are in a natural biologically active form and differ from synthetic PGR not naturally produced by plants.

The micronutrients in Grow More Seaweed Extract have a large volume of naturally occurring chelating agents, such as alginic acid, amino acid which forms chelation complexes with Cu, Fe, Mn, Mg and Ca. Mannitol and alginic acids also found in Seaweed Extract have similar chelating activity and the naturally occurring laminarin stimulates the systemic acquired resistance (SAR) response in plants.

Antioxidant compounds found in Seaweed Extract may provide immune related benefits, reduction of fungal pathogen damage, heighten disease resistance and promote membrane integrity and increased shelf life. Several compounds found in Seaweed Extract and under research include superoxide dismutase, glutathione peroxidase, glutathione reductase, ascorbate peroxidase, tocopherol and carotene.

## SPECIAL FUNCTIONS

- Foliar Feeding - field, vegetables & fruit crops
- Enhances seed germination - seed inoculants
- Improves vigor and color- enhances chlorophyll production
- Increases plants' resistance - drought & diseases
- Reduces production stress
- Stimulates Plants Resistance to diseases

### General Directions:

Use as a foliar spray applied by itself or in combination with other liquid or water soluble fertilizers or pesticides.

## FOLIAR APPLICATION RATES

Dissolve in water before using. Apply as a full coverage spray:

### • Fruits & Nut Trees:

Use 5 to 12 ozs. of Seaweed Extract per acre. (0.40 to 1.0 liter Extract/HA) Dilute in 50 to 100 gals. of water, (140 to 340 mL in 200 to 400 liters water)

### • Field & Vegetables Crops:

Use 12 ozs. per acre. (0.40 Ltr/HA) Dilute in 50 to 100 gals. of water, (0.40 Ltr of Extract in 400 liters water)

### • Turf, Shrubs, Ornamental Landscaping:

Use 2 to 5 ozs. per acre. (0.15 to 0.40 Ltr Extract/HA) Dilute in 50 to 100 gals. of water, (55-140 mL in 190 to 380 liters water)

## SOIL IRRIGATION RATES:

### HORTICULTURE

(Fertigation - Injector Tank Ratio 1:100)

For constant feeding with every irrigation - use 4 ozs per gallon (30 mL per liter) of holding tank solution. For intermittent feeding (7 to 10-day irrigation schedule) use 1 pint (16 ozs.) per gallon (125 mL per liter) of holding tank solution.

### AGRICULTURE

Apply 1-2 quarts Extract/Acre (2-5 Ltrs/HA) Through irrigation system, drip, micro sprinklers or flood.

# • Liquid Organic Kelp • 100% Natural • Foliar or Soil Drench

## PRODUCT APPLICATION

### Agricultural

- Increases yield and quality of field, vegetable, fruit & nut crops
- enhances drought & heat tolerance
- Enhances quality and nutritional value of crop
- Accepted for organic farming
- Improved fruit set, reduced fruit drop
- Apply any time during the growing season up until harvest
- Feeds beneficial soil microbes



### Horticulture

- Stimulates beneficial microbes in the soil
- Stimulates shoot & root growth
- Stronger establishment of seedling
- Increased resistance to pest and disease
- Improved overall plant vigor
- Increases chlorophyll levels
- Improved flower set

### Golf - Turf Grass

- Increases activity of beneficial soil micro organism, improves efficiency of mineralization and fertilizer release.
- Increases leaf growth & tillering
- Improves root mass
- Increases tolerance to stress & drought.

## APPLICATION RECOMMENDATION

When possible avoid applications during heat of the day or dry, windy condition. Early morning or late evening applications are best. Best results will be achieved by making more frequent applications every 2 to 3 weeks rather than increasing the concentration of the spray solution.

## FRUIT & NUT TREES, VINES:

6 applications during the season is recommended, apply as foliar or irrigation system

### Fruit, Nut Trees, Vines:

1st spray begins at signs of first growth in the Spring;  
2nd spray at pink bud;  
3rd spray at fruit set;\*  
Subsequent sprays every 2 to 3 weeks.  
Use 2-liter/HA in minimum 200 liters water

### Strawberries:

1st spray when there are sufficient leaves;  
2nd spray at first bloom;  
3rd spray at fruit set;  
Subsequent sprays every 2 to 3 weeks through picking.  
Use 2-liter/HA in minimum 200 liters water.

\*NOTE: Seaweed Extract will increase fruit set, avoid bloom spray in hard to thin crops i.e. grapes, apples.

## VEGETABLE CROPS:

### Beans, Peas:

1st Spray at 4 to 6-inch stage  
2nd spray at pre-flower  
3rd spray at bloom

### Broccoli, Cauliflower, Cabbage:

1st spray at 4 to 6-inch true leaf stage;  
2nd spray at head initiation  
Use 2-liter/HA minimum 200 liters water

### Carrots, Onions, Leeks:

1st spray when foliage is large enough to spray.  
2nd spray at root enlargement time.

### Potato:

1st spray 28 days after full emergence  
2nd spray 14 days later, prior to tuber set or flower initiation

### Eggplants, Peppers:

1st spray at 6 to 8-inch growth stage;  
2nd spray at pre-bloom stage;  
3rd spray at fruit set.

### Tomatoes:

1st spray at 4 to 6 inch growth stage;  
2nd spray at pre-bloom;  
3rd spray at fruit set;  
4th spray 2 to 3 weeks later.

### Seed Treatment:

To help break dormancy, coat seeds briefly in a solution of 1-liter diluted in 100 - 200 liters of water.

### Transplant Solution:

Soak roots to help reduce transplant shock in a solution of 1-liter diluted in 100 - 200 liters of water. Soak around base of plants at or just after transplanting. Water prior to planting.

## FIELD CROPS:

### Alfalfa, Hay & Forage Crops:

1st Application in early spring; Repeat every 2 weeks after each cutting or have pasturing. Use 1-liter/HA in 100 liters of water. Apply foliar or irrigation system.

### Corn:

1st spray at 4 to 6-inch growth stage;  
2nd spray at 10 to 14-inch growth stage  
3rd spray just before tasseling

### Soybeans:

1st spray when buds appear;  
2nd spray at full bloom; Follow with 2 more sprays at 2 to 3-week intervals.

### Sunflowers & Other Oil Seed Crops:

1st spray at seedling stage;  
2nd spray at flowering;

### Small Grain Crops:

1st spray at 4 to 8-inch growth stage  
2nd spray at flowering or seed-head time; Subsequent sprays at 2 to 3 weeks intervals if desired.  
Use 2-Liter/HA in minimum 200-Liters of water.

### Turf Grass:

Apply 1 to 2 quarts per acre at 2 to 3 weeks intervals.  
20-30 mL / 100 sq. m.

## TYPICAL ANALYSIS:

### N-P-K & Secondary Nutrients:

Nitrogen (N)	0.20 - 0.38%
Magnesium (Mg)	0.04 - 0.073%
Phosphorous (P <sub>2</sub> O <sub>5</sub> )	0.12 - 0.24%
Sulfur (S)	0.24 - 0.27%
Potassium (K <sub>2</sub> O)	1.8 - 8.0%
Chlorine (Cl)	0.24 - 0.48%
Calcium, (Ca)	0.01 - 0.25%
Sodium (Na)	0.28 - 0.48%

## MICRO-NUTRIENTS:

Boron (B)	12 - 18 ppm
Iron (Fe)	18 - 30 ppm
Cobalt (Co)	0.6 ppm
Manganese (Mn)	1 - 1.4 ppm
Copper (Cu)	3.6 - 6 ppm
Zinc (Zn)	6 - 9.6 ppm

## PLANT GROWTH COMPOUNDS:

### Auxin:

0.12 - 0.14 gm/US Gallon (32 - 37 mg/Ltr.)

### I.A.A. - Gibberlin Activity:

0.22 - 0.26 gm/US Gallon (58-69 mg/Ltr.)

### Cytokinin Activity:

± 100 ppm (100 mg/Ltr) 6 cytokinins

## CARBOHYDRATES, PROTEIN & ORGANIC ACIDS:

Mannitol	0.48 - 0.84%
Laminarin	0.96 - 1.6%
Alginic Acid	1.2 - 2.4%
Protein as Amino Acid	1.25 - 2.3%
Organic Matter	5.4 - 6.6%
Other Carbohydrates	1.4%

## VITAMINS:

Vitamin E	0.24 - 4.20 mg/100 g
Niacin	2.50 - 4.00 ppm
Biotin	0.02 - 0.09 ppm
Riboflavin	1.00 - 2.00 ppm
Carotene	3.00 - 10.00 ppm
Thiamine	0.14 - 0.29 ppm
Folic Acid	0.04 ppm
Vitamin C	12.00 - 240.00 ppm

Note: ppm equivalent to mg/L

## AMINO ACIDS:

Alanine	Arginine	Aspartic Acid
Citrulline	Cystine	Glutamic Acid
Glycine	Histidine	Isoleucine
Leucine	Lysine	Methionine
Ornithine	Proline	Phenylalanine
Serine	Threonine	Tryptophane
Tryosine	Valine	

## PRODUCT LIST

### LIQUID PRODUCTS:

Seaweed Extract 11%  
Seaweed Extract 26%  
Seaweed Extract plus different NPK & micronutrient levels  
Custom Formulations

### FORMULATIONS WITH HUMIC ACID, FULVIC ACID, AMINO ACIDS:

Seaweed Extract plus single element micronutrients  
i.e. Ca, Mg, Fe, Mn, Cu, Zn, B, Mo.

Seaweed Extract with various multi mix micronutrients combinations.

Seaweed Extract with Fulvic or Amino Acid.

Custom Formulations