Highly concentrated seaweed extract



HydraSea 50[®]

CONTAINS SEAWEED (ASCOPHYLLUM NODOSUM) 50% SOLIDS

HydraSea 50[®] is an organic concentrate of the most researched seaweed in the world – *Ascophyllum nodosum* (A. nodosum). It is a highly concentrated solution of A. nodosum seaweed extracts, delivering more organic bioactives such as macro- and micro-nutrients, enzymes, amino acids, unique polysaccharides and plant hormone-like compounds (cytokinin- and auxin-like activity).

A. nodosum seaweed grows solely in the North Atlantic Ocean and is sustainably hand harvested. This ensures only living and fresh seaweed is harvested to produce *HydraSea 50*.

The extreme climatic conditions in which it grows means the plant has developed a unique range of biochemicals that enable it to thrive in harsh conditions. This resistance to weather extremes is passed on to the target plant, reducing susceptibility to heat, soil salinity (osmotic pressure imbalance and induced moisture stress), cold and frost.

HydraSea 50 is 2 to 5 times higher in minerals and bioactives than comparable products in the market, and almost 20 times higher than commonly used low grade products. This means lower application rates can be used. It delivers a wide range of beneficial bioactive substances to crops and pastures for normal plant growth, stem strength, bud promotion and flowering.

HydraSea 50®	
Harvest process	Hand harvested, ensuring no dead or dying material is used.
Origin	Sourced off the west coast of Ireland in the north Atlantic Ocean.
Species	Ascophyllum nodosum is the most widely researched seaweed in the world, preferred for its beneficial properties to plants.
Process	Produced using mild alkaline hydrolosis, ensuring bioactives and minerals are retained in the final product.

A foliar application of *HydraSea 50*°:

- enhances stress tolerance to abiotic factors – salinity, drought and freezing stress tolerance
- improves both the growth and productivity of agricultural crops by increasing nutrient availability and uptake by modulating phytohormones and stimulating root growth
- increases the plant's phenolic, antioxidant and essential amino acids content
- improves growth, fruit quality, ripening rate, post-harvest storage



Rich source of bioactive compounds

HydraSea 50 enriches crops and supplements the soil microbiota with a wide range of nutrients. It is a rich source of various bioactive compounds.

Composition				
Seaweed extract (Ascophyllum nodosum)	100%			
Dissolved Solids (w/v)	48 – 52%			
Organic Matter	25.00 – 29.00%			
Ash (Minerals)	19.00 – 23.00%			

Nutrients	Concentration rate		
Nitrogen (N)	0.33 – 0.55%		
Phosphorus (P)	0.006 – 0.01%		
Potassium (K)	7.5 – 9.5%		
Sulphur (S)	0.96 – 1.18%		
Calcium (Ca)	240 – 320 ppm		
Sodium (Na)	0.7 – 1.5%		
Magnesium (Mg)	1920 – 3040 ppm		
Boron (B)	95 – 320 ppm		
Copper (Cu)	45 – 270 ppm		
Manganese (Mn)	160 – 480 ppm		
Iron (Fe)	48 – 320 ppm		
Zinc (Zn)	48 – 160 ppm		

Amino acids can play different roles in plants, such as growth stimulation, increase chlorophyll concentration and photosynthesis, regulate osmotic pressure, chelate micronutrients and increase their leaf absorption and mobility.

They are also stress-reducing agents, hormone precursors, aid biosynthesis of non-protein compounds like vitamins, coenzymes, pigments, etc.

The application of ready for uptake amino acids allows plants to save energy and increase the pace of their development or regrowth, especially in critical times of plant development.

L-Amino acids	2.0 – 2.5%			
Observed Growth Response (bioassay values)				
Hormone level	300 – 500ppm			
Polysaccharides	12.5 – 14.0%			





Increasing the soil's fertility is one of the key principles of BioAg programs and products.

BioAg is an Australian owned and operated manufacturer of liquid biostimulants and natural phosphate fertilisers, since 1999. Your local BioAg Area Managers are always available to discuss how the products and programs can improve your farming system or put you in contact with our distributor network.

BioAg's range of proprietary fermented liquid cultures or biostimulants **improve fertiliser usage** at each critical stage of crop or pasture development.

Recommended rates of use

Please note – crop stress and growing conditions are used to determine the optimal rate for any application. Applications are recommended at the most vulnerable crop growth stages or/and during abiotic stress conditions.

To discuss your individual requirements, please contact your BioAg agronomist.

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Crop group	Crops	Rate, L/ha	Growth stage
Cereals	Wheat, barley, oats, sorghum, rice, maize	0.25 0.5	4-6 leaves Pre-flowering
Other broadacre	Cotton	0.25 0.5	4-6 true leaves Pre-flowering
Brassicas	Cabbage, broccoli, cauliflower, canola*	0.35 0.5	3-4 true leaves Head formation/*At flowering
Legumes	Beans, peas, peanuts	0.25 0.5	3-4 trifoliate Pre-flowering
Cucurbits	Cucumber, pumpkin, squash, rockmelon, watermelon	0.25 0.5	3-4 true leaves Pre-flowering
Leafy vegetables	Lettuce, spinach, celery, kale, herbs	0.35 0.5	After transplanting Middle of the circle
Tuber/root	Beetroot, carrot, potato	0.35 0.5	4-6 leaves Stolons development
Fruity vegetables	Tomato, capsicum, pepper	0.25 0.5	After transplanting Pre-flowering
Bulb crops	Onion, garlic, shallot	0.35 0.5	Tillering Bulb initiation
	Stone (peach, nectarine, apricot), almonds	0.5 0.5	After bud break Fruit growth
Tree crops	Pome (apple, pear, quince)	0.5	Pre-flowering
	Nuts (walnuts, pecan, hazelnut, almonds)	0.5	Pre-flowering
		0.5	Nut set
Berries	Strawberry, blueberry, raspberry, blackberry	0.5 0.5	After bud break Fruit growth
Vines	Table and wine grapes, kiwifruit, passionfruit	0.5 0.5	Pre-flowering Veraison
Sugar cane	Plant cane Ratoon cane	0.5 0.5	Furrow/cane sett Enough foliage
Transplants	Dipping 1:500	-	-
Seedlings	3mL/L per tray	-	-

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HydraSea 50 is suited to a wide range of farming practices; pastures as well as crops like wine and table grapes,vegetables, fruit or nut tree crops, cereals, cotton, maize, and sugarcane.

It is compatible with a wide range of common fertilisers and other agricultural products.

Directions for use

Formulated for foliar application (high leaf absorption). Very low use rates.

Before using this product, seek appropriate agronomic advice: www.bioag.com.au/contact

Not recommended for mixing with calcium products, strong acidic and strong oxidising products, or organosilicone based wetters.







Trial summary



The comprehensive BioAg website provides independent and replicated trial results proving *HydraSea 50*'s ability to rectify and condition the soil, improve fertiliser use efficiency, and enhance yield.

