



# BIOPOWER<sup>®</sup>

## CONCENTRATED MARINE PLANT EXTRACT FLAKE

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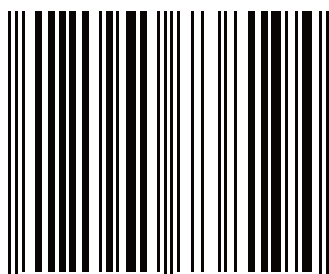
*A Pure Seaweed Bio Stimulant extracted from fresh *Ascophyllum nodosum**

For use in pasture, turf, arable crops, kiwifruit, viticulture, avocados and many other horticultural and vegetable crops as a bio stimulant to support plant growth, increase yields, improve fruit quality and to aid plants in overcoming climatic factors, leading to improved resistance from insect attack or fungal infection.

BioPower<sup>®</sup> is manufactured using biological fermentation under low temperature and negative pressure then spray dried.



GSBF194/F04



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BIOPOWER<sup>®</sup> FLAKE  
NET CONTENTS: 20 kg

**Grosafe<sup>®</sup>**

# BIOPOWER® FLAKE

## BioPower® Extract Flake for General Use

**BioPower®** Marine Plant Extract Flake is derived from fresh *Ascophyllum nodosum* marine plants harvested from clean, cool, sustainable, coastal environments. It is a natural storehouse of major and minor nutrients, carbohydrates, amino acids and naturally occurring plant bio stimulants, which support crop health, nutrition and quality.

**Benefits of Use:** Consistent use of **BioPower®** Seaweed Extract supplements a well balanced nutritional programme. Use **BioPower®** Seaweed Extract to increase desirable yield, improve overall plant nutritional health, improve root growth and development, improve plant vigour and maximise crop potential during periods of stress. To achieve the desired results the levels of major and minor nutrients must be adequate to support the increased production potential from the use of **BioPower®** Seaweed Extract.

**Storage and Handling:** This product contains natural preservatives but should be stored away from intense sunlight and heat. Avoid spillage as product is very slippery and may create a hazard.

**Compatibility:** **BioPower®** Seaweed Extract is compatible with most herbicides, fungicides, insecticides and fertilisers. Some pH adjustment may be required with acidic mixtures. Add surfactants after the product has completely dissolved in the tank solution. When mixing with calcium products thoroughly mix **BioPower®** Seaweed Extract with the water in the tank prior to adding the calcium product. If compatibility of chemicals is unknown a 'jar' test is recommended.

**Safety Data Sheet:** A safety data sheet is available from Grosafe Chemicals Limited.  
**Product Information Sheet:** A product information sheet including a *Certificate of Analysis* detailing macro and micro nutrients, carbohydrates and amino acids is available from Grosafe Chemicals Limited.

**EMERGENCY RESPONSE: 0800 CHEMCALL (0800 243 622).**

### DIRECTIONS FOR USE

**BioPower®** Seaweed Extract is water soluble and is suitable for use in liquid foliar, soil applied, irrigation and fertigation applications.

**Mixing Instructions:** When possible, add **BioPower®** Seaweed Extract to the spray or fertiliser tank mix first. Fill half the mixing tank with clean water, begin agitation and gradually add recommended quantity of **BioPower®** Seaweed Extract and the remainder of water.

**Foliar Applications:** Use enough water for good spray coverage. Foliar sprays should be applied as a fine mist with low fluid velocity until the foliage is wet. In general terms application rates should not exceed 2000 litres per hectare in dense tree crop situations and be scaled back in crops where the foliage is sparser. Do not foliar apply during times of moisture or heat stress. For best results apply during the cool part of the day (morning or evening), when temperatures are below 25°C. Do not spray just before or after rainfall or sprinkler irrigation. Use a non-ionic surfactant for maximum coverage and leaf adhesion.

**Soil Applications:** Soil applied treatments can be made by soil directed sprays of **BioPower®** Seaweed Extract on its own, or tank mixed with other fertilisers or pesticides, by sidedress treatments, applications through irrigation systems or other methods which effectively apply **BioPower®** Seaweed Extract to the soil. When making irrigation treatments, dilute one part **BioPower®** Seaweed Extract with at least five parts of water before adding to the supply tank. Continuous agitation of the supply tank is recommended. **BioPower®** Seaweed Extract can be applied through drip, micro sprinkler, overhead sprinkler, furrow, flood and other types of irrigation at recommended rates. For micro sprinkler, solid jet or drip irrigation, apply after the system has reached operating pressure. Inject for at least one hour followed by a two hour flushing cycle to clear the system of all product. Avoid heavy irrigation following product application to prevent leaching of material from the plant root zone.

### APPLICATION RATES

**Fertigation (Irrigation application):** used alone or as a synergising agent to mineral fertilisers. **Dosage 1.0–2.0 kg/ha**

**Seed Soaking:** Soak seeds to be planted for 5–8 hours in a dilution of **1 g/litre of water (dilution rate of 1:1000)**. Soakage time is dependent on the thickness of the seed coat.

**Root Dipping:** Can reduce mortality rates by dipping planter bags, plant containers or bare rooted plants for five minutes. **Dosage 5 g/10 litres of water prior to planting (dilution rate of 1:2000)**. After planting bare rooted plants, a root drenching at the same dilution rate is recommended.

**Foliar Application:** Apply at 50–100 g per 100 litres of water. Apply a minimum of one kg per hectare. Do not exceed 2000 litres of water per hectare.

VEGETABLES	Foliar Application Timing — Application Rate 1.0 – 2.0 kg/ha			
	1st Application	2nd Application	3rd Application	Optional
Beans and Peas	Six-leaf stage	Commencement of flowering	First pods	Pod fill
Broccoli, Cabbage and Cauliflower	Six-leaf stage	3 weeks after first application	Head initiation	Head development
Carrots, Leeks and Onions	2 weeks after emergence	Root enlargement	Every 2 weeks until harvest	
Capsicums, Eggplants, Melons Squash and Pumpkins	Six-leaf stage	Commencement of flowering	First fruit set	4 weeks after 3rd application
Cucurbits and Cucumbers	Six-leaf stage	Immediately prior to flowering	Every 2 weeks until harvest	
Sweetcorn	Six-leaf stage	55–75cm height	Just prior to tasselling	
Potatoes	Six-leaf stage	0.5cm tubers	Commencement of flowering	Tuber growth
Tomatoes (Fresh Market)	Six-leaf stage	Commencement of flowering	Apply at picking	2 weeks after 3rd application

FRUIT	Foliar Application Timing — Application Rate 1.0 – 2.0 kg/ha				
	1st Application	2nd Application	3rd Application	4th Application	Optional
Grapes	20–30cm cane	45–60cm cane	Full bloom	Berry set	3 weeks after 4th application
Apples, Pears and Kiwifruit	Green tip	Pre-bloom pink bud	Full bloom	Early fruit formation	Every 3 weeks
Avocados and Citrus	Early bloom	Petal fall	Summer spray	Autumn spray	Every 3 weeks
Berry fruit	After transplant	Prior to bloom	While picking	3 weeks later	Every 3 weeks
Stone fruit	Bud burst	Petal fall	4 weeks after 2nd application	3 weeks after 3rd application	Every 3 weeks
Plums and Cherries	Pink white bud	Full bloom	Early fruit formation	3 weeks after 3rd application	Every 3 weeks

CEREALS	Foliar Application Timing — Application Rate 500g – 1.0 kg/ha			
	1st Application	2nd Application	3rd Application	Optional
Wheat and Oats (Winter)	First node detectable	Flag leaf		After any environmental stress
Barley (Winter)	Early post emergence (2 leaf stage)	Flag leaf		After any environmental stress
Wheat and Oats (Spring)	1–3 Tillers (GS 12–13)	First node	Flag leaf and after any environmental stress	
Barley (Spring)	1–3 Tillers (GS 12–13)	First node	Flag leaf and after any environmental stress	
Maize	2–6 leaf stage	At 50–75cm growth	Just prior to tasselling	

BROAD ACRE	Broadcast Foliar Application, Overhead Sprinkler and Flood Irrigation			
	Application: Apply 1.0 – 2.0 kg/ha as a broadcast spray in 200–300 litres of water per hectare BioPower® Seaweed Extract can be added to irrigation systems as a metred dose			
Lucerne	Apply after each cut			
Pasture	1. Recommended to apply 'little and often' once a month throughout the year. 2. Apply as a Bio stimulant to increase the number and activity of beneficial soil micro-organisms. This will improve grass growth and help reduce soil-born disease symptoms in pasture.			
Turf	1. Apply to greens, tees and fairways. 2. Regular applications (monthly) are beneficial. The Bio stimulant activity of <b>BioPower®</b> Seaweed Extract will support beneficial soil micro-organisms, improve grass growth and help reduce soil born disease symptoms in turf. 3. Tilling in turf will also be increased, without excessive top growth.			

**WARRANTY:** This formulation is warranted to contain the specified contents when packed. The user bears the risk for the damage resulting from factors beyond the manufacturer's control. The manufacturer declines all liability for damage resulting from improper storage or use of the product.

Registered and distributed by: Grosafe Chemicals Ltd  
 20 Jean Batten Drive  
 Mt Maunganui 3116  
 PO Box 14-450 Tauranga 3141  
 Tel: 0800 220 002  
 Email: info@grosafe.co.nz  
 www.grosafe.co.nz

Batch No:  
 Date of Manufacture:



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