

## BioGan® 4-2-0

### 100 % Natural Organic Fertilizer from Crab Shell

**BioGan® 4-2-0** is a natural, organic fertilizer derived from the fresh cuttings and shells of Dungeness Crab (*Metacarcinus magister*) harvested and processed for human consumption. All processing is domestic and shore-based. All facilities are federally inspected. Our fertilizer is registered for use in organic agriculture by the Washington State Department of Agriculture (WSDA) Organic Food Program. It contains no additives for processing or preservation.

**BioGan® 4-2-0** is a concentrated source of water insoluble, slow-release nitrogen. In addition, it supplies phosphorus and calcium, and a complete array of major and secondary soil nutrients. Chitin content of this fertilizer is approximately 15 %. Our fertilizer is ideal for establishing fertile soils and growing healthy plants. It releases nutrients slowly and evenly as it decomposes through natural soil microbial activity.

**BioGan® 4-2-0** is a product of the United States of America. It is traceable with documentation showing source and processing of raw material utilized in manufacturing. Our company benefits from vertical integration within a human seafood company, Pacific Seafood Group, through access to their electronic tracking of catch, landings and processing, and the subsequent disposition of fresh crab cuttings. Pacific Seafood Group maintains strict quality standards based on scientifically-derived FSMA/HACCP systems at all our locations to ensure that the product you receive is the highest quality.

Customers are always welcome to visit our facilities and review our practices. Our definition of excellence, “*consistently doing your best and always striving to do better*”, demonstrates our commitment to providing a traceable, sustainable and wholesome product to our customers and yours.

#### Guaranteed Analysis

Total Nitrogen	4.0 %
Ammoniacal Nitrogen	0.0 %
Water Insoluble Nitrogen	3.5 %
Water Soluble Nitrogen	0.5 %
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	2.0 %
Soluble Potash (K <sub>2</sub> O)	0.0 %
Calcium	18.0 %

**Major/Secondary Nutrients**

Phosphorus	1.5 %
Phosphorus as P <sub>2</sub> O <sub>5</sub>	3.5 %
Potassium	0.2 %
Potassium as K <sub>2</sub> O	0.3 %
Sulfur	0.2 %
Calcium	18.0 %
Magnesium	0.8 %
Sodium	1.5 %

**Micronutrients (ppm)**

Iron	135
Zinc	35
Copper	12
Manganese	12
Boron	10
Arsenic	10
Cadmium	BDL
Cobalt	BDL
Molybdenum	BDL
Lead	BDL
Nickel	BDL
Selenium	BDL

**Other Nutrient Properties**

Moisture	6.0 %
Total Solids	94.0 %
C:N Ratio	5.5:1
Total Carbon	22.0 %
Chloride	0.8 %
Chitin	Approximately 15.0 %

**Product Characteristics**

Color	Light brown to off-white
Odor	Mild crab
Physical	From whole shell to <2.5 mm
Density	Varies depending on size desired
pH	9.5 – 10.0
Storage	Store in a cool, dry place in original packaging
Stability	36 months when appropriately stored



## **Certification**

This product maintains a Material Registration Certificate from Washington State Department of Agriculture, and is verified to comply with the USDA National Organic Standards (7 CFR Part 205).  
Registration #: 2165

## **Packaging**

Bulk bags

## **Processing Statements**

Allergen: This product contains crustacean shellfish and is processed in a facility that processes fish.

This product is not intended for human consumption.

The values for major/secondary nutrients, micronutrients, other nutrient properties, and product characteristics are typical and expected.

## **Manufacturer**

BioOregon Protein, Inc.

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