

# BIOLOGICAL LIQUID FISH FERTILISER

**BIO MARINUS™** is manufactured by the enzymatic hydrolysis of fish and is designed to provide a high quality, cost effective biological fertiliser.

**BIO MARINUS™** is produced from a Sustainable Fishing Resource, harvested according to the New Zealand Quota Management System. Our enzymatic hydrolysis manufacturing method utilises the offal from our fish processing plant.

## BIOLOGICAL FERTILISER FOR ENHANCING SOILS

Biologically active soils have the ability to retain moisture and release nutrients ensuring greater production, faster rotation and more rapid recovery from stress. To build a healthy biological soil we need products that can feed living organisms.

Increasing public awareness of the environmental impact of using chemical-based fertiliser has created a demand for a safe, natural and environmentally friendly fertiliser. Biological fertilisers increase nutrient availability and feed important soil organisms, such as earthworms and microorganisms (fungi and bacteria) – all essential for plant and soil health.

Soil health and soil fertility requires much more than NPK fertiliser. Without the right biology, plants and animals cannot reach their full potential. Biology is essential for the recycling of nutrients and the fixing of atmospheric nitrogen.

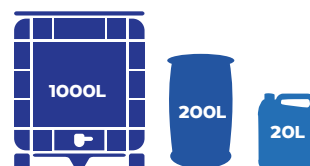
## NUTRIENTS FROM THE SEA FOR HEALTHIER SOILS, HEALTHIER PLANTS & HEALTHIER ANIMALS

- ✓ Unique enzymatic production process
- ✓ Soil biology enhancing compounds
- ✓ A complete range of Major and Trace Minerals
- ✓ Added selected beneficial microbes for soil and plant
- ✓ Improves plant productivity and condition
- ✓ Improves the health of animals
- ✓ Non-toxic. Nil withholding period



**BIO MARINUS™** is a complex and complete fertiliser for healthier soils, healthier plants and healthier animals.

**AVAILABLE IN THESE VOLUMES**



## BENEFITS OF BIO MARINUS™

**BIO MARINUS™** can be used as both ground and foliar application and it benefits plants during all growth stages. It can be used as a stand alone application or in conjunction with other compatible products.

Naturally occurring proteins, oils, trace elements, amino acids, minerals and vitamins provide the nutrients required for healthy plant growth.

During manufacture, seaweed, carbon extract and stubble digesting microorganisms have been added with the aim of assisting thatch breakdown. Addressing thatch can enhance nutrient cycling, improve soil structure and moisture holding capacity, and boost general biological activity in soils.

Additional biology includes Trichoderma to assist with the decomposition of many natural substances and thus enhance nutrient cycling in the soil and Bacillus subtilis to beneficially colonise plant shoot and root surfaces. Both these organisms have been utilised in biological control to augment natural plant defences.

**BIO MARINUS™** is Mother Nature's fertiliser, blending multiple nutrients and trace elements from the sea that even Democritus, the Greek father of chemistry, would have been proud to create.

# APPLICATION INFORMATION

**BIO MARINUS™** is suitable for all crops

## SHEEP & BEEF PASTURE

We recommend 6 applications per year of 15-20L per hectare per application, or a minimum of 3 applications of 30-40L per hectare per year, initially in September/October, then in December/January and again in April/May.

## DAIRY PASTURE

We recommend 8 applications per year of 12-15L per hectare per application, or a minimum of 6 applications per year of 15-20L per hectare per application. Ideally twice in September/October, twice in December/January and twice in April/May.

## CROPPING

### GROUND APPLICATION\*

15-20L per hectare prior to planting.

### FOLIAR

Dilute 1:100 as a foliar spray, apply 3-4 times per crop, or as required.

**DO NOT spray during the heat of the day. Spray early morning, late evening or on an overcast day.**

## VITICULTURE

### GROUND APPLICATION\*

Soil drench at 10-15L per hectare over prunings, during spring flush and post harvest.

### FERTIGATION

4L per hectare every 10-14 days.  
Minimum 4 applications during season.

### FOLIAR

Dilute 1:100 as a canopy application for disease control and nutrition. Apply every 10-14 days or as required.

**DO NOT spray during the heat of the day. Spray early morning, late evening or on an overcast day.**

### STUBBLE BREAKING

15L per hectare mixed with 2L molasses or 2kg industrial sugar.

\* **Suggestion:** During Ground Application the addition of 2kg of industrial sugar or 2 litres of molasses per hectare may help speed up biological activity response.

## TYPICAL ANALYSIS

### MACRO ELEMENTS

|                  |       |
|------------------|-------|
| Nitrogen .....   | 2.20% |
| Phosphorus ..... | 1.55% |
| Potassium .....  | 0.28% |
| Calcium .....    | 0.37% |
| Sulphur .....    | 0.18% |
| Magnesium .....  | 0.09% |

### TRACE ELEMENTS

|                  |           |
|------------------|-----------|
| Manganese .....  | 165.26ppm |
| Iron .....       | 123.40ppm |
| Zinc .....       | 72.44ppm  |
| Molybdenum ..... | 8.50ppm   |
| Copper .....     | 6.00ppm   |
| Boron .....      | 3.93ppm   |
| Cobalt .....     | 1.82ppm   |
| Selenium .....   | 1.20ppm   |

Levels can vary slightly with this natural product

**PH587**

**NPK: 2.20 - 1.55 - 0.28**

## MANUFACTURING PROCESS

The process used to manufacture **BIO MARINUS™** is an enzymatic hydrolysis of fish at low temperature. This retains the proteins, amino acids, naturally occurring vitamins, 7% to 10% fish oil (including Omega 3), and 7% to 10% hydrolysed fish bone. The addition of both seaweed and a carbon extract of humic/fulvic acid to this blend increases beneficial bacterial and fungal activity and plant nutrient availability of both calcium and magnesium.

We believe **BIO MARINUS™** Liquid Fish Fertiliser is one of the most complex and complete biological fertilisers produced in New Zealand. This is all designed to provide a high quality, cost effective biological fertiliser for use in agriculture and horticulture.

**Disclaimer:** As United Fisheries and their distributors have no control over storage or use of this product, no liability for accident or damage will be accepted.

## IMPORTANT INFORMATION

Mix well prior to use. Compatible with most fungicides, insecticides, fertilisers and nutritional products. Test mix prior to application. When mixed with herbicides the fish oil in this product serves as a natural surfactant when foliar spraying.

**DO NOT STORE THIS PRODUCT IN ITS DILUTED FORM**

## TRY THE RANGE

**BIO MARINUS™** Biological Liquid Fish Fertiliser

**BIO MARINUS™** Organic Liquid Fish Fertiliser

**BIO MARINUS™** Hydrolysed Fish Fertiliser  
(Bio Gro Certified Input)



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