

# Vitamin Sea N

## 18-0-0

Extract of fish 49%

Organo-mineral Fertilizer  
Fertilizer Group ( c ) Min. Dec. 257921/2004  
Marketing Authorization No. 223

### What is Vitamin Sea N?

Vitamin Sea N is an organo-mineral liquid fertilizer which has fish as its basic raw material. It focuses on a continuous, stable, and carefully balanced supply of nitrogen to the crop ensuring that deficiencies or excesses (oversupply) with possible adverse effects on plant growth and health are avoided. It simultaneously provides three main forms of nitrogen (ureic, nitrate, ammonia) in balanced proportions, enhancing both direct and indirect nitrogen supply and reducing the risk of excess and excessive nitrogen losses.

The plants are provided with a both direct and gradual supply of nitrogen at any critical stage of their development. Vitamin Sea N contains an organic substance that favors the chelation of N through its active ingredients, thus improving plant uptake, making it more efficient in its use and reducing losses due to leaching or aeration, with significant economic benefits for the producer and minimizing the environmental impact (eutrophication).



### The role of Nitrogen (N)

- Improves the uptake and use of potassium and phosphorus by plants
- Provides a rich, dark green colour to plants
- Promotes the formation of leaves and stems
- Stimulates root development
- Improves fruit quality
- Enhances the growth of leaf vegetables
- Increases the protein content of cereals and the oil content of oil in seeds of oil crops
- Causes rapid and early growth of plants

## Nitrogen deficiency in plants

Nitrogen is a mobile element in plants. Therefore, symptoms of nitrogen deficiency first appear in the older leaves from which nitrogen moves to younger leaves and vigorously growing tissues to meet the needs of the plant. The deficiency is manifested by reduced growth rate, chlorosis (change in leaf colour from green to yellow), red-violet spots on the leaves and limited development of lateral shoot or fruit buds. All of the above contribute to the appearance of weak, stunted plants with slender stems of limited height with small leaves at acute angles and small-sized fruits. The end result of nitrogen deficiency is a quantitative and qualitative deterioration of production.

Robust growth and development of all plants requires a balanced supply of nitrogen. Its judicious use leads to high and high quality yields, while excessive use increases the susceptibility of plants to disease and insects as plant tissues become more waterlogged with weak cell walls.

## Method of Application & Dosage

With the irrigation system (Fertigation) and foliar.

**Fertigation:** 15-30 lt/Ha

**Foliar Application:** 200-300 cc at 100 liters water

## Why do we choose Vitamin Sea N?

Stimulates photosynthetic activity, formation and utilization of carbohydrates.

It is a stimulant of healthy plant growth and function.

Contributes to the improvement of soil physico-chemical parameters.

Improves the efficiency of nitrogen use.

Improves the protein content of cereals.

## Composition

The application of Vitamin Sea N is necessary in the early stages of plant growth but when the plant has sufficiently developed the first leaves and a deeper root system than in the initial growth phase (germination and development of the seedling) in order to achieve efficient use of nitrogen and to avoid unnecessary interference with environmental pollution without the expected benefits. Its use is also recommended in later stages of plant growth to maintain sufficient leaf area, particularly in leafy vegetable crops. The number of applications is determined on the basis of the crop's nutrient requirements for nitrogen.

| Nutrient element                         | % w/w       |
|------------------------------------------|-------------|
| Total Nitrogen (N)                       | 17,5        |
| Nitric Nitrogen                          | 4,4         |
| Ammoniacal Nitrogen (N-NH <sub>4</sub> ) | 4,6         |
| Ureic Nitrogen (N-NH <sub>2</sub> )      | 8,5         |
| Organic Carbon                           | 2,2         |
| Organic Matter on dry                    | 9,6         |
| Total Amino acids                        | 328 mg/100g |
| EC                                       | 4800 µS/cm  |

pH: 7,1