

## NATURSAN BIO



### FEATURES

Elicitor and Biostimulant (increase in the development of the root system), fungistatic (defense against fungal attacks), nematostatic (protection against plant parasitic nematodes) and protector against airborne diseases.

It modulates the activity of the PAL. NATURSAN BIO, activates the secondary metabolism of the plant. With the application of NATURSAN BIO it activates the defense mechanisms of plants (SAR), increases the production of anti-stress proteins and increases the endogenous production of growth hormones. NATURSAN BIO is favorable in the following crops: Table Grapes, Wine Vine, Citrus Fruits, Kiwi, Olive, Fruit Trees in general, Vegetables, Strawberries, Raspberries, Blueberries, etc.

### GUARANTEED ANALYSIS

CHITOSAN (Poly-D-glucosamine)

(% M/M)

3,00%

## NATURSAN BIO CU



### FEATURES

In NATURSAN BIO Cu, copper has a direct effect on the healing of wounds and cuts in plants, such as falling leaves or pruning cuts. This effect is achieved because copper is also a SAR ion, which induces the activation of indirect response mechanisms for defense against different types of diseases, known as elicitation of the plant's immune system. Copper is also an important microelement, which participates in the synthesis of numerous enzymes.

In addition to the action of Copper, Chitosan adds the activation of powerful metabolic pathways complementary to those activated by Copper. These complementary pathways converge to produce defense and growth promoting substances. Chitosan, in contact with plant tissues, favors the transcription of defense proteins, such as, for example, phytoalexins, which are plant antibodies, also anti-stress proteins, which aim to provide stability in photosynthetic activity and also to produce strengthening of the plant.

### GUARANTEED ANALYSIS

CHITOSAN (Poly-D-glucosamine)

(% M/M)

1,72%

Copper (Cu) soluble in water

4,30%

## NATURSAN 250



### FEATURES

NATURSAN 250 is a complex copper-based formula that is easily absorbed and quickly translocated to all plant organs. It also contains chitosan (poly-D-glucosamine) in solution, which is a natural polymer that is extracted from the shells of crustaceans. NATURSAN 250 prevents copper deficiencies and activates the resistance mechanisms of the plant (production of phytoalexins, chitinase, glucanase, etc.).

Applied promptly, it gives plants greater vitality. The presence of complexed copper has a synergistic effect with chitosan which enhances the firmness of the crops.

### GUARANTEED ANALYSIS

CHITOSAN (Poly-D-glucosamine)

(% M/V)

2,50%

Copper (Cu) soluble in water

5,00%

## NATURSAN BIO P CU



### FEATURES

NATURSAN BIO P Cu is a foliar fertilizer and an inducer-activator of the plant immune system the SAR mechanism. It combines three active ingredients which are: chitosan, phosphate and copper ions, complexed with carboxylic acids. It is a blend that combines three elicitors that modulate secondary metabolism, providing multiple defense pathways to plants against different types of stress, both biotic and abiotic. In turn, NATURSAN BIO P Cu, by itself, is a nutrient source of copper and phosphorus, important in the redox reactions of plants, especially those that have to do with photosynthesis, as well as in all catabolic reactions that require power.

### GUARANTEED ANALYSIS

CHITOSAN (Poly-D-glucosamine)

(% M/V)

1,50%

Phosphorus pentoxide (P2O5) soluble in water

12,00%

Copper (Cu) soluble in water

3,50%

## POTASIO TRIPLE 150



### FEATURES

POTASSIUM TRIPLE 150, is a product that combines 5 active ingredients in optimal proportions: chitosan (Pol-liD-glucosamine), nitrogen, phosphorus, potassium and the essential cation Mg (II). Chitosan and phosphorus are two active elicitor ingredients of secondary metabolism through the modulation of PAL (Phenylalanine Ammonium Liasa) and, therefore, they are activators of the immune system of plants through the SAR mechanism.

Mg (II), on the other hand, as an essential nutritional element, tries to make up for and / or correct any deficiencies in this object.

The combination of Mg (II) with SAR elicitors facilitates their entry into tissue and / or plant cells. The addition of phosphorus and chitosan helps maintain a stable level of metabolic activity at the cellular level. That is, it allows the tissue to constantly carry out its metabolic activities. Somehow the elicitors relieve tissues and / or cells from any kind of stress. This allows a stable stomatal opening in the leaf with active photosynthesis, which also favors greater efficiency in the use of the magnesium supplied for the product. Physiologically, Magnesium is a primary constituent of chlorophyll, without which photosynthesis would not have happened. Magnesium also acts as a structural component in ribosomes, stabilizing their structure, which is necessary for proper protein synthesis. It also plays an essential role in carbohydrate metabolism. Furthermore, Magnesium is an element of high mobility in the plant, so the deficiency symptoms are detected in mature leaves.

### GUARANTEED ANALYSIS

Total nitrogen (N)

(% M/V)

3,00%

Urea nitrogen (N)

3,00%

Phosphorus pentoxide (P2O5) soluble in water

10,00%

Potassium oxide (K2O) soluble in water

15,00%

Magnesium (MgO) soluble in water

3,00%

CHITOSAN (Poly-D-glucosamine)

1,50%

## NATURSAN BIO MN



### FEATURES

NATURSAN BIO Mn is a product designed to prevent manganese deficiencies. NATURSAN BIO Mn is specially formulated to allow greater penetration and mobility of these micronutrients in the plant and more effectively prevent the deficiencies of these elements. NATURSAN BIO Mn also contains chitosan (polysaccharide of natural origin) which improves the resistance of the plant to the most fungal diseases. Common. Plants treated with NATURSAN BIO Mn are more resistant to stress.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	2,00%
Manganese (Mn) soluble in water	3,00%

### Benefits of NATURSAN BIO Zn:

- Induction of the acquired resistance system (SAR).
- Increases radical and aerial development.
- Fungistatic and nematostatic effect.
- Accelerates the translocation of zinc throughout the plant.
- Increases the formation of sprouts.
- Improves fruit and grain setting and filling process.
- Regulates the starch translocation process.
- Increases crop production and quality.
- Helps cover the nutritional deficiencies of zinc.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	2,00%
Zinc (Zn) soluble in water	3,00%

## NATURSAN BIO MG



### FEATURES

NATURSAN BIO Mg is a chitosan-based product that activates the SAR response mechanisms. The complexed magnesium stimulates the absorption of phosphorus and the synthesis of amino acids and starch. Chitosan acts as an elicitor of plant defense mechanisms by stimulating the synthesis of various enzymes, resistance proteins and phytoalexins. For its part, magnesium is a fundamental constituent of chlorophyll contributing to greater photosynthetic efficiency and in turn is part of the ribosomal structure thus optimizing protein synthesis.

### Benefits of NATURSAN BIO Mg:

- Induction of the acquired resistance system (SAR)
- Increases the emission of roots and roots
- Greater vigor and degree of lignification of plants.
- Increases the synthesis of amino acids and proteins.
- Improves absorption and translocation of phosphorus
- Fungistatic and nematostatic effect
- Increases photosynthetic efficiency
- Increases crop production and quality.
- Covers the nutritional deficiencies of magnesium

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	2,00%
Magnesium (Mg) soluble in water	3,00%

## NATURSAN P



### FEATURES

NATURSAN P, is a product that basically combines two active ingredients: chitosan polymer (polyglucosamine) and phosphorous acid. The two active ingredients are elicitors of secondary metabolism, through the modulation of PAL (Phenylalanine Ammonium Liase) and, therefore, of activators of the immune system of plants through the SAR mechanism. The idea of combining pure phosphorous acid with this polymer is to stabilize it with the latter avoiding the use of a salt. The aim is to have a product that combines only chitosan with phosphate ion in high quantities, in order to have an excellent signal to stimulate the mechanism. SAR, which among other things allows to produce high levels of phytoalexins. Excellent source of phosphorus and very good complement for the prevention of fungal attacks on the root system.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	1,50%
Phosphorus pentoxide (P2O5) soluble in water	36,50%

## NATURSAN BIO PK



### FEATURES

NATURISMO BIO PK contains Potassium and Phosphorus as a whole, it is presented as one of the most interesting tools from the point of view of the stimulation of the SAR (Systemic Acquired Resistance) mechanism, on the one hand Chitosan (poly-D-glucosamine) produces an effect immunostimulant that induces the activation of defense mechanisms of plant tissues against different types of diseases, in what is known as elicitation of the plant immune system. This means the production of defense substances and anti-stress proteins.

Now, the peculiarity of Chitosan is that it does not have a great systemic effect on the plant but it has an excellent residuality. Therefore the elicitation of the SAR occurs rather from the outside within the plant and with a very lasting effect.

Potassium, on the other hand, has a great systemic effect on the plant, almost immediately traveling along the watercourse, but with fewer residues. In short, the action of Potassium and Chitosan enhances the activation of the plant's immune system and biostimulates its growth.

## NATURSAN BIO ZN



### FEATURES

NATURSAN BIO Zn is a chitosan-based product that activates the SAR response mechanisms and allows the complexation of zinc which is absorbed and translocated more efficiently throughout the plant.

NATURSAN BIO Zn stimulates the mechanisms of acquired systemic resistance (SAR) which causes the synthesis of phytoalexins, enzymes and resistance proteins against various pathogens. In turn, the supply of zinc increases the synthesis of IAA (indolacetic acid), the formation of buds, the germination of pollen and is involved in the synthesis and partitioning of starch.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	1,50%
Phosphorus pentoxide (P2O5) soluble in water	8,00%
Potassium oxide (K2O) soluble in water	7,30%

- Increases the formation of sprouts.
- Improves fruit and grain setting and filling process.
- Regulates the starch translocation process.
- Increases crop production and quality.
- Helps cover the nutritional deficiencies of zinc.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	2,00%
Zinc (Zn) soluble in water	3,00%

## FOSS NATUR BIO P-MG



### FEATURES

NATURSAN BIO Zn is a chitosan-based product that activates the SAR response mechanisms and allows the complexation of zinc which is absorbed and translocated more efficiently throughout the plant.

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Benefits of NATURSAN BIO Zn:

- Induction of the acquired resistance system (SAR).
- Increases radical and aerial development.
- Fungistatic and nematostatic effect.
- Accelerates the translocation of zinc throughout the plant.
- Increases the formation of sprouts.
- Improves fruit and grain setting and filling process.
- Regulates the starch translocation process.
- Increases crop production and quality.
- Helps cover the nutritional deficiencies of zinc.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	2,00%
Zinc (Zn) soluble in water	3,00%

## FOSS NATUR BIO P-MG



### FEATURES

FOSS NATUR BIO P-Mg, is a product that combines 3 active ingredients in optimal proportions: chitosan, phosphorus ion and the essential cation Mg (II). The first two active ingredients are elicitors of secondary metabolism through the modulation of PAL (Phenylalanine Ammonium Liase) and, therefore, are Activators of the Immunological System of plants through the SAR mechanism. Mg (II), on the other hand, as an essential nutritional element, tries to make up for and / or correct any deficiencies in this object. The combination of Mg (II) with both the two SAR elicitors facilitates its entry into the tissues and / or vegetable cells. The addition of the phosphate ion and chitosan helps to maintain a stable level of metabolic activity at the cellular level. That is, it allows the tissue to constantly carry out its metabolic activities.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	1,60%
Phosphorus pentoxide (P2O5) soluble in water	16,00%
Magnesium (MgO) soluble in water	4,00%

## NATURSAN BIO P-ZN



### FEATURES

NATURSAN BIO Zn is a chitosan-based product that activates the SAR response mechanisms and allows the complexation of zinc which is absorbed and translocated more efficiently throughout the plant.

NATURSAN BIO Zn stimulates the mechanisms of acquired systemic resistance (SAR) which causes the synthesis of phytoalexins, enzymes and resistance proteins against various pathogens. In turn, the supply of zinc increases the synthesis of IAA (indolacetic acid), the formation of buds, the germination of pollen and is involved in the synthesis and partitioning of starch.

Benefits of NATURSAN BIO Zn:

- Induction of the acquired resistance system (SAR).
- Increases radical and aerial development.
- Fungistatic and nematostatic effect.
- Accelerates the translocation of zinc throughout the plant.

## NATURSAN BIO P-ZN



### FEATURES

NATURSAN BIO P-Zn, is a product that essentially combines three active ingredients: Chitosan, phosphorus ion and the essential micronutrient Zinc. The first two active ingredients are elicitors of secondary metabolism, through the modulation of PAL (Phenylalanine Ammonium Liase) and, therefore, Activators of the immune system of plants through the SAR mechanism. Zinc, on the other hand, as an essential nutritional element, seeks to provide and / or correct any deficiency of the elements. The idea of combining Zinc with the two SAR elicitors is to facilitate its entry into the tissue and / or plant cells. The addition of the Phosphorus Ion and Chitosan helps to maintain a stable metabolic activity level at the cellular level, i.e. it will allow the tissue to carry out its metabolic activities in a constant, which will contribute to an efficient zinc supply.

GUARANTEED ANALYSIS	(% M/M)
CHITOSAN (Poly-D-glucosamine)	1,50%
Phosphorus pentoxide (P2O5) soluble in water	11,70%
Zinc (Zn) soluble in water	3,50%