# **Condensed Liquid Nitrogen-Boron Fertilizer**



# 18 - 0 - 0 + 1,9B + 14% Ascophyllum nodosum

**NBA** is a liquid organomineral Nitrogen-Boron fertilizer. 85% of the contained Nitrogen is slow release derived from poly-methylene urea, while Boron comes from borate of high Boron content. Furthermore, **NBA** contains 14% seaweed extract which stimulates plant growth and increases the plant's ability to assimilate Nitrogen and Boron resulting in a much greater efficiency of the product.

TYPICAL ANALYSIS (w/w)	
Nitrogen	18.6 %
Poly-methylene Nitrogen	
Urea Nitrogen	
Boron	1.9 %
Seaweed extract	.14.0 %

#### **SLOW RELEASE NITROGEN**

The 85% of the contained in **NBA** Nitrogen is slow release derived from poly-methylene urea. The release of the nitrogen occurs slowly through the progressive break down of the long chain of carbon atoms (C) that synthesize the molecule of polymethylene urea. This decomposition is caused by the micro organisms, the hydrolysis and the ultraviolet radiation.

Fast released nitrogen fertilizers have 25-40% nitrogen losses during their application due to evaporation and leaching. Consequently not only they have reduced efficiency but also they contaminate the environment. On the contrary, by using slow release fertilizers, nitrogen losses do not occur, nitrogen does not leach away into ground waters and does not evaporate. So, by applying slow release fertilizers, the index of fertilizer's efficiency per cost unit is increased and as a result they are more cost effective since the total amount of the necessary for the plants nitrogen is reduced.

Since **NBA** has sticking and wetting properties, nitrogen and other nutrients stick on the leaves when it is applied foliarly and in parallel **NBA** is not washed away by rain or excessive watering when it is applied by fertigation.



#### **BORON**

Boron plays a key role in the construction of the cell wall of the plant cells and also increases the cell divisions. It helps in the pollen tube elongation as well as in the pollination of flowers and that is why the presence of boron is necessary during flowering. Also, it contributes to the sugars and nutrients transport from the leaves to the fruit. It is involved to the fruit sizing and reduces fruit losses from cracking, fruit pitting and cork formation. Unless the levels of boron in apples are adequate, the bitter pit on apples is rare. Boron also increases fruit setting in olive and other crops of high needs in boron.

Boron just like calcium is enough immobile inside plants, so the plants should continuously uptake boron during the whole growing season.

#### **SEAWEED EXTRACT**

Seaweed extracts improve the nutrient uptake by the plants. Furthermore they increase blooming and fruition. They contribute to the increase of the production and improve the quality of the harvest. Research has shown that polymethylene urea combined with seaweed extract achieves much higher yields than applying polymethylene urea individually.

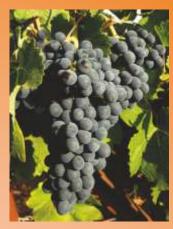






In tomatoes, **NBA** elongates branches and increases the fruit set capacity. So, more nodes are formed resulting in an increase in the number of fruits.







In olives, the Boron deficiency reduces significantly the quality of the harvest. **NBA** promotes growth, increases blooming and improves fruit setting resulting in an increase in the crop yield of the olive tree.

In citrus, it increases
blooming, fruit
setting and fruit
sizing. In addition
NBA assists in the
suppression of the
red mite due to its
sticking attributes.



## **APPLICATIONS- APPLICATION RATES**

# Foliar applications

Generally, apply 3-4 times throughout the growing season (in most crops it is applied at the growth stage, at blooming and at fruit setting) at the following application rates:

Olive: 2.5-10 l/ha Grapevine: 4-10 l/ha

Citrus: 2.5-5 I/ha. It can also be used for the control of the red mite at a rate of 750 ml/100 l of water.

Arboriculture: 2.5-12.5 l/ha Vegetables: 2-10 l/ha Sugar beets: 3-7.5 l/ha Fodders: 2.5-6 l/ha

## Soil applications

Apply every 15-30 days during the growing season according to the needs of each crop. The total application rates that must be applied during the whole growing season are:

Vegetables, Strawberry: 25-45 I/ha

Grapevines: 25-45 l/ha Trees, Bushes: 45 l/ha

#### **PROPERTIES**

**NBA** combines the advantages of the slow release nitrogen with the benefits of Boron and the excellent attributes of the seaweed extract. In particular **NBA**:

- ◆ Remains on the leaves or in the soil for a longer period of time and releases nitrogen gradually so that it can be fully absorbed by the plants.
- ◆ Due to its sticking properties, NBA holds Boron and the nutrients of the seaweed on the leaves or near the roots, resulting in their increased assimilation by the plant.
- ◆ Provides settled growth in any crop while in parallel accelerates the cell processes achieving an increased fruit setting.
- ◆ Assists in the protein synthesis which has a significant effect on the production of plant hormones.
- Has a very low salt index and does not cause phytotoxicity.
- ◆ Is a source of energy for the beneficial soil micro organisms.
- ◆ Does not leach or vaporize.
- ◆ Does not contaminate the environment since it does not contain nitrates.
- ◆ Does not crystallize on the leaf and does not create sediment in the tank.
- ◆ Can be used as a sticking or wetting agent.