



BIOZ[®]

Nephrite

 Nitrogen. Energy. Productivity. It's all about Bioz[®] Nephrite.

Description

Nephrite is a technology to boost nitrogen metabolism throughout the crop cycle. Nitrogen is one of the most required nutrients by crops and is demanded throughout the whole crop cycle. We took a long period of studies, more than 6 years, to identify the factors that interfere in this process. From that we developed a new technology to enhance biological nitrogen fixation in legumes and nitrogen metabolism in other crops.

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How Does Nephrite Work?

Nephrite is developed to stimulate and maintain biological nitrogen fixation throughout the crop cycle, improving fixation efficiency to deliver more energy

for the plants. By increasing the rate that nitrogen is transformed into proteins, crops generate heavier grains boosting productivity in the field.

Nephrite has six modes of action:

- Nephrite stimulates the synthesis of auxins in the aerial part of the plants, which are then sent to the root system
- In the root system, the auxins stimulate the synthesis of cytokinins
- Increases the efficiency of biological nitrogen fixation by reducing energy expenditure
- Between 30 and 60% of the energy supplied to nitrogenase can be lost as H_2
- Nephrite activates the hydrogenase enzyme, which will recycle the hydrogen gas releasing energy for the process
- Savings of 11% to 25% of carbon, which can now be used by the plant to grow leaves, pods, and grains.

Nephrite acts to reduce ethylene biosynthesis, keeping the nodules alive longer preventing their premature death.

In addition to the hormonal promoters, Nephrite provides essential nutrients for the biological fixation process, ensuring its operation until the end of the cycle.

Benefits

- \\ Provides the continuous formation of young, strong nodules, through the modulation of the plant's hormonal balance.
- \\ Makes nitrogen fixation much more efficient, providing more energy for the plant to grow.
- \\ Quick transformation of the nitrogen provided by the nodules into proteins and heavier grains.
- \\ Maintains the supply of energy to the nodules.
- \\ Reduces the formation of ethylene in the plant, avoiding premature death of the nodules.

 Provides essential elements to keep the nodules physiologically active.

Application rates

Crop	Dose (g/ha)	Application method	Application time
Rice and wheat	500	Foliar	Apply at start of tillering
Beans	300	Foliar	Apply in the vegetative phase from V4 (3rd unrolled trifoliate leaf).
Maize	500	Foliar	Apply between stages V4-V6 (4th to 6th expanded leaf).
Soybeans	300	Foliar	Apply between stages V3-V5 (3rd to 5th unrolled trifoliate leaf).

For other crops please contact your technical support.

Exploring recommended crops

This product is suitable for all types of crops, such as:



Melon

Everything you need to know about melon fertilization, best practice, field trials, and more.

[Complete guide to Melon](#)

[View all crops](#)

Attention

Trial first on a small scale before changing the rate, application, or any other variables. As circumstances can differ and as the application of our products is beyond our control, ICL cannot be held responsible for any adverse results. Contact your ICL advisor for more detailed advice.

<https://icl-growingsolutions.com/agriculture/products/nephrite/>

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