N-Evolution

MICROORGANISMS
The power of microorganisms to feed the plant with atmospheric nitrogen

Optimizes nitrogen absorption thanks to nitrogen-fixing microorganisms

Boosts crop yield even under stress conditions

Stimulates the plant's photosynthetic activity, health, and growth

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N-Evolution

TWIN PACK

Characteristics

N-Evolution is a product based on a microbial consortium designed to stimulate photosynthetic activity and optimize nitrogen nutrition in plants, reducing the need for nitrogen fertilizers. Thanks to **MICRO TEAM®** technology, the product combines a targeted selection of nitrogen-fixing bacteria, including *Azotobacter chroococcum* OG15342* and *Azospirillum brasilense* OG19325*, microbial strains of the *Bacillus* genus (*B. subtilis* OG39365*, *Bacillus amyloliquefaciens* OG33450*, *B. velezensis* OG58369*), mycorrhizal fungi (*Glomus* spp.), and *Trichoderma harzianum* OG99566*. The nitrogen-fixing bacteria fix atmospheric nitrogen asymbiotically, converting it into ammonium, which is then supplied to plant cells to synthesize essential nucleic acids and proteins. Additionally, these bacteria can solubilize phosphorus, transforming it into easily assimilable forms, thus helping to optimize nutritional uptake. The presence of mycorrhizal fungi of the *Glomus* spp. genus and *Bacillus* strains enhance this effect as they promote nutrient absorption (nitrogen, phosphorus, micronutrients). The microbial consortium in **N-Evolution** also supports the overall health of the plant, as it quickly colonizes the roots and soil, limiting the development of pathogens and boosting the plant's defence system, thereby increasing its resistance to diseases. Finally, thanks to the **TWIN PACK** formulation, the product's packaging includes a separate container for *Trichoderma harzianum* OG99566* to prevent unwanted competition with other microorganisms, which could reduce their effective concentration in the composition and, consequently, the product's effectiveness in the field.

Composition

	w/w (CFU/g)	w/v (CFU/ml)
Mycorrhizae (*Glomus* spp.)	30%	36%
Azotobacter chroococcum OG15342*	$4{,}07 \times 10^{8}$	$5{,}00 \times 10^{8}$
Azospirillum brasilense OG19325*	$1{,}00 \times 10^{8}$	$1{,}00 \times 10^{8}$
Bacillus subtilis OG39365*	$1{,}67 \times 10^{8}$	$2{,}00 \times 10^{8}$

	w/w (CFU/g)	w/v (CFU/ml)
Bacillus amyloliquefaciens OG33450*	$1{,}67 \times 10^{8}$	$2{,}00 \times 10^{8}$
Bacillus velezensis OG58369*	$4{,}17 \times 10^{8}$	$5{,}00 \times 10^{8}$
Trichoderma harzianum OG99566*	$8{,}33 \times 10^{7}$	$1{,}00 \times 10^{8}$

Raw materials: inoculum of endomycorrhizal fungi on sorghum roots, non-composted simple plant amendment, rhizospheric bacteria.
*Exclusive strain isolated and deposited by Organazoto in an international microbial collection.

Doses and Instructions

CROPS	FOLIAR APPLICATION	DOSI lt/ha*
Horticultural crops	During the growth phase	0.5-1
Fruit trees	During the growth phase	0.5-1
Industrial crops	During all the vegetative cycle	0.5-1
Cereals	Between the end of the tillering phase and the beginning of stem elongation	0.5-1

* The doses are indicative and should be adjusted based on the characteristics of the area and the specific needs of each crop.

Formulation	Packaging	Density (T=20°C)	pH (sol. 6 %)	Conductivity (sol. 10 %)
Soluble liquid	1-5 l	~ 1200 kg/m³	~ 4	~ 1,8 dS/m

Warnings

It is recommended not to mix this product with chemical products to avoid compromising its characteristics (it contains living organisms). Please store in sealed packaging, in a cool, dry place, protected from light and heat (8°C < T < 25°C). Avoid contact with eyes and skin. Organazoto assumes no responsibility for improper storage and/or handling.

Technical Notes

FOLIAR APPLICATION

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