FOLIAR BACTERIA

MADE IN FRANCE

# N-LEAF

Agronutrition

## BioFertiliser technologies

**3 phyllosphere bacteria strains: 3x10$^9$ CFU/mL**
2 strains of *Methylobacterium*
1 strain of *Arthrobacter*
**CFU: colony-forming unit*

The product does not contain genetically modified organisms or pathogenic organisms (salmonella, faecal coliform, aerobic mesophilic and nematode eggs)


## Specifications

**PACK SIZE**
1 L

**FORMULATION**
Pure Bacteria solution

**FORM**
Liquid

**APPLICATION**
Foliar

**STORAGE CONDITIONS - SHELF-LIFE:**
Keep in the original container out of direct sunlight, tightly closed, in a safe place away from children, animal and foodstuffs. Store at a temperature between 4°C and 25°C. Do not expose to frost and temperatures >35°C.
SHELF LIFE : 18 months.

## Agronomic interests

### ROLE OF MICRO-ORGANISM(S)

100% live formulation.
N-LEAF is a foliar Biofertiliser with 3 complementary bacterial strains for fixing atmospheric Nitrogen.

Two strains of *Methylobacterium* that are endophytic and one strain of Arthrobacter have been selected for their high capacity to fix atmospheric nitrogen.

The phyllosphere constitutes the aerial parts of plants. It is considered as the largest habitat for micro-organisms after the soil.

N-LEAF 3 bacteria are naturally found in the leaf microbiota of many crops. They have a strong adaptation to all types of plants. This will result in fast development and adaptation to the vegetation (within a few days).

### PRODUCT SPECIFICATIONS

COMPOSED OF NITROGEN-FIXING BACTERIA.
N-LEAF IS AN INNOVATIVE TECHNOLOGY BASED ON A CAREFUL SELECTION OF BACTERIA FROM THE PHYLLOSPHERE.

These bacteria applied to the foliage will :
- Fix atmospheric nitrogen
- Improve the efficiency of its use by the plant
- Provide natural nitrogen to the plant as a complement to soil inputs

### FEATURES AND BENEFITS OF THE FORMULATION

**Atmospheric Nitrogen Fixation**
atmospheric nitrogen is converted by the N-Leaf bacteria into ammonium and nitrates, ready to be absorbed by the plant.
This symbiotic interaction between the crop and N-Leaf bacteria contributes to a good nitrogen supply independent of the root absorption capacity. An equivalent of 20 to 25 units of Nitrogen minimum is provided to the plants.

**Growth Hormone Production**
N-LEAF bacteria produce phytohormones such as auxin and cytokinins. These growth hormones will participate in the promotion of plant growth and by expanding the leaf surface, contribute to an increased photosynthetic activity.

**Stimulation of Root Activity**
The stimulation of photosynthesis translates, at the physiological level, into an activation of the metabolism (need for nutrients) and thus boosts root activity to meet its needs. Root development and better exploitation of soil reserves

**Occupation of Leaf space (Antagonism function)**
Due to concentration of bacteria in N-LEAF (10$^9$ CFU/mL), the bacteria occupy the physical leaf space, increasing competition between organisms for resources and space and limiting other opportunistic bacteria or pathogens from establishing.

## Directions of use

### CROP RECOMMENDATIONS

**FOLIAR APPLICATION on sufficiently developed foliage**

**Cereals:** 0.5L/ha at 1-2 node stage BBCH 31-32
**Rapeseed:** 0.5L/ha at end of winter BBCH30
**Corn:** 0.5L/ha at 4-5 leaves BBCH 14-15
**Sunflower:** 0,.5L/ha at 4-5 leaves BBCH 14-15
**Soya:** 0.5L/ha at V2 stage
**Potatoes:** 0.5L/ha at 4-5 leaves BBCH 14-15
**Vegetables:** 0.5L/ha at BBCH 13-31
**Grapes:** 1L/ha at BBCH 17-71
**Fruit trees:** 1L/ha at BBCH 31-39

The more time passes, the lower the concentration of bacteria.

### Instructions for use

Shake before use
For better efficiency: use the product alone in a clean spray.
Adjust the volume of water to the treated surface
Do not apply the product 4 to 7 days before or after herbicide or copper applications.

Best applied in the evening or early morning (when humidity rises).

## Precautions

COMPATIBILITY: Always read the product labels and follow the manufacturers' instructions for all products at all times. Some settings, outside the control of the manufacturer or distributor, may have repercussions on the performance of co-applied products. Therefore, the co-application is made at the risk of the end user. When combining with other components in a tank-mix, always add this product in last. If there is any doubt at all, consult the manufacturer or distributor concerned.

IMPORTANT: respect the uses, doses, conditions and instructions for use mentioned on the packaging, which are determined according to the characteristics of the product and the applications for which it is recommended. On this basis, conduct the crop and treatments according to the best agricultural practices taking into account, under your responsibility, all the specific factors concerning your farm, such as soil characteristics, weather conditions, cropping methods, cultivars and their specific resistances. AGRONUTRITION guarantees the quality its products only in their initial packaging over the period indicated on the manufacturer's certificates. They guarantee their conformity to the composition indicated on the packaging and to the regulations currently in force. Precautionary measure brochures are available on request. **To request a MSDS, thank you to contact : infoau@desangosse.com**

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