



APPROVED FOR ORGANIC FARMING

Introduction

Nitrogen is the most important element in plant nutrition, which determines the yield and quality of crops. This element is important for many processes in plant cells. Nitrogen is also the main element of chlorophyll, which carries out one of the most important processes on earth – photosynthesis. Nitrogen is also a major component of amino acids, RNA and DNA. Plants can absorb nitrates and ammonium ions, but atmospheric molecular nitrogen is not available to plants.

Challenges

Intensive tillage, increased mineral fertilizer rates and non-compliance with scientific advice lead to soil erosion and reduced fertility. Excessive use of nitrogen fertilizers leads to changes in the nitrogen cycle, pollutes groundwater and contributes significantly to the greenhouse effect. It is known that only about 30-60% of mineral nitrogen is used in plant nutrition. Today, the challenge is to solve the nitrogen problem in agro-ecosystems by minimizing environmental damage, reducing the use of mineral nitrogen and improving the absorption of atmospheric N.

Solution

N-FOLIAR, a microbiological biostimulator for plants, for efficient atmospheric nitrogen fixation through leaves.

Benefits and Results

- Reduces mineral nitrogen fertilizers by up to 40 kg/ha of active ingredient;
- Stimulates plant growth and development;
- Improves plant nutritional status due to increased nutrient uptake;
- Better quality yield;
- Can be used on organic farms.



Application rate, technology

Application rate: cereals: 1 L/ha – BBCH 25-61 (winter), BBCH 25-32 (spring); rapeseed: 1 L/ha – BBCH 16-18 and/or BBCH 30-69 (winter), BBCH 16-69 (spring), corn, sunflower: 1 L/ha – BBCH 14-18; sugarbeet: 1 L/ha – BBCH 14-61; vegetables: 1 L/ha – BBCH 21-61; fruit trees, fruit bushes: 2 L/ha – BBCH 31-61; berries: 1 L/ha – BBCH 15-61.

Application requirements: the sprayer pressure must be 1-10 bar or 15-145 psi; nozzle size is at least 50 µm.

Specifications

Composition: *Methylobacterium phyllosphaerae* MVY-033 (1.2×10^{12} CFU/L); K-1040 mg/L; Na-1350 mg/L; Ca-15.3 mg/L; S-182 mg/L; P-52,44 mg/L; Mg-13,8 mg/L.

- **Biological activity:** biological fixation of atmospheric nitrogen; free-living microorganism;
- **Physical state:** liquid biological product;
- **Viability, shelf life:** 6 months. The manufacturer does not recommend storing the product above 30 °C.
- **Working conditions:** 5-39 °C soil temperature; 4 to 9.5 pH;
- **Chemical parameters:** dry matter, 7.7%; pH, 6.5; organic matter, 70.9%;
- **Physical parameters:** colour from dark brown to black; density 1.03 g/cm³.