AZOFIX Rhizo

FOR FIXATION OF ATMOSPHERIC NITROGEN

FIBL – Registered
LV – No. 10.01-1569-17
CZ – No. V555

BIO ENERGY LT

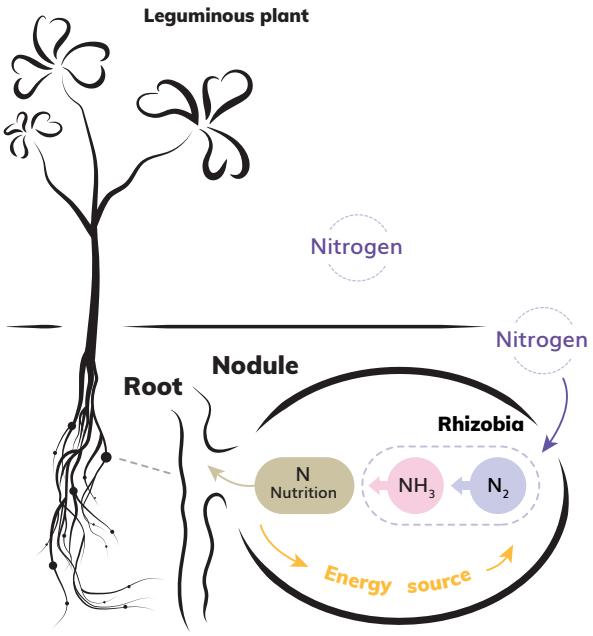
LABORATORY CERTIFICATE QUALITY CONTROL

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.

Figure 1.



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 nitrogen.

Solution

Azofix Rhizo is a microbiological biostimulator for peas and beans, known to form symbiotic associations with plants and assuring efficient atmospheric nitrogen fixation and accordingly, ensuring the nutritional needs of plants.

Registration information and certificates
Suitable for: beans, peas.

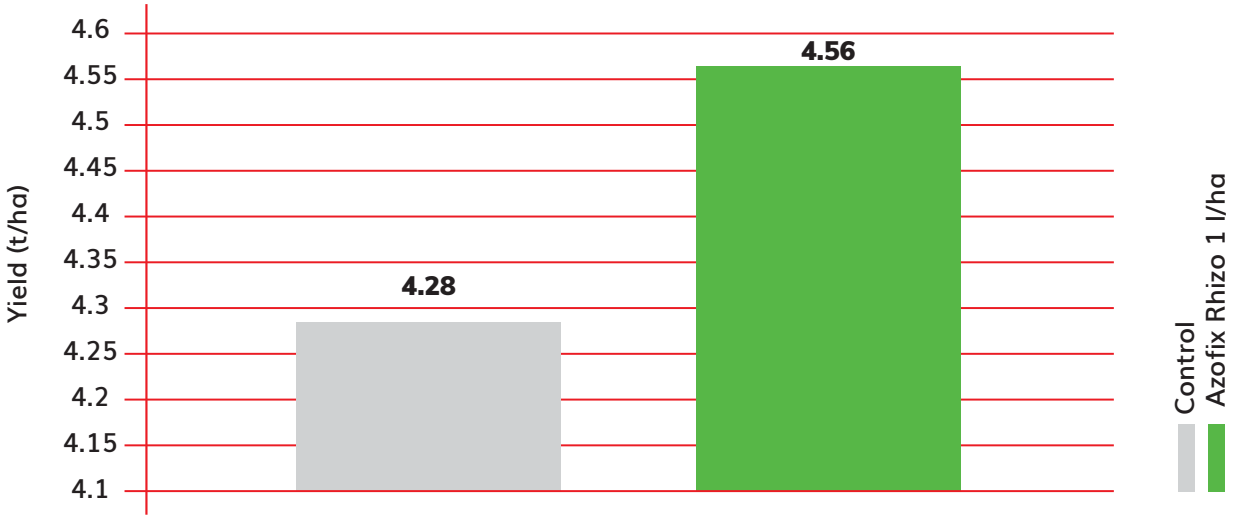
Mode of action

Azofix Rhizo bacteria, when introduced into the soil, begin to absorb nitrogen from the atmosphere. These bacteria are symbiotic and only form a symbiosis with the roots of bean and peas plants, accumulating atmospheric nitrogen by forming nodules on the roots.

Benefits and Results

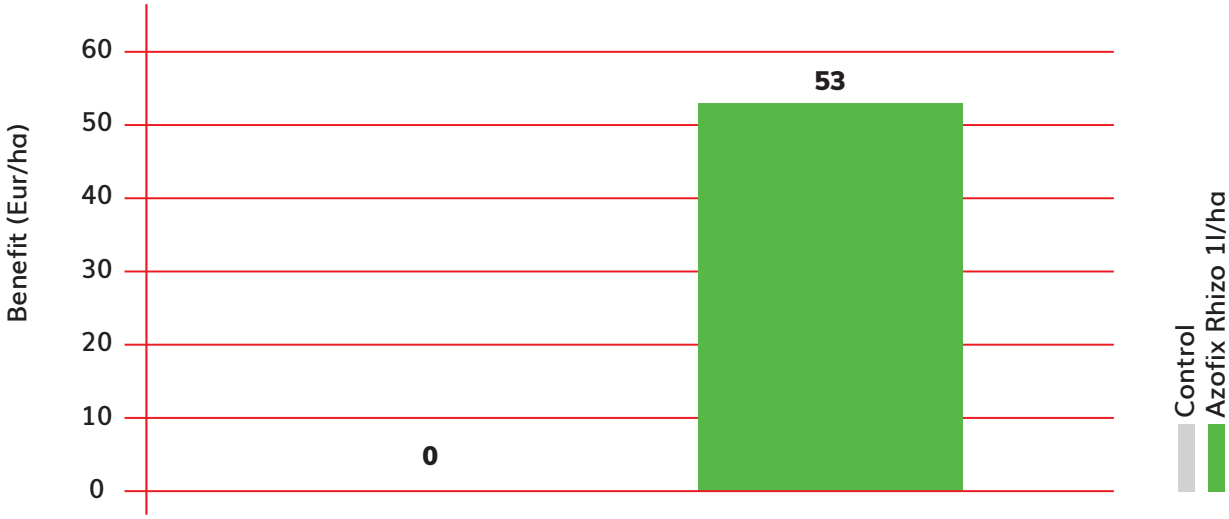
- More intensive formation of nodules on the roots of the plant;
- More efficient fixation of atmospheric nitrogen; up to 50 kg/ha of active ingredient;
- Higher seed germination energy;
- The potential of plant genetic productivity is developed;
- Better quality yield;
- Promotes the biological activity of soils;
- Improves soil structure and sorption, water and air regimes in the soil;
- Can be used on organic farms.

Figure 2.



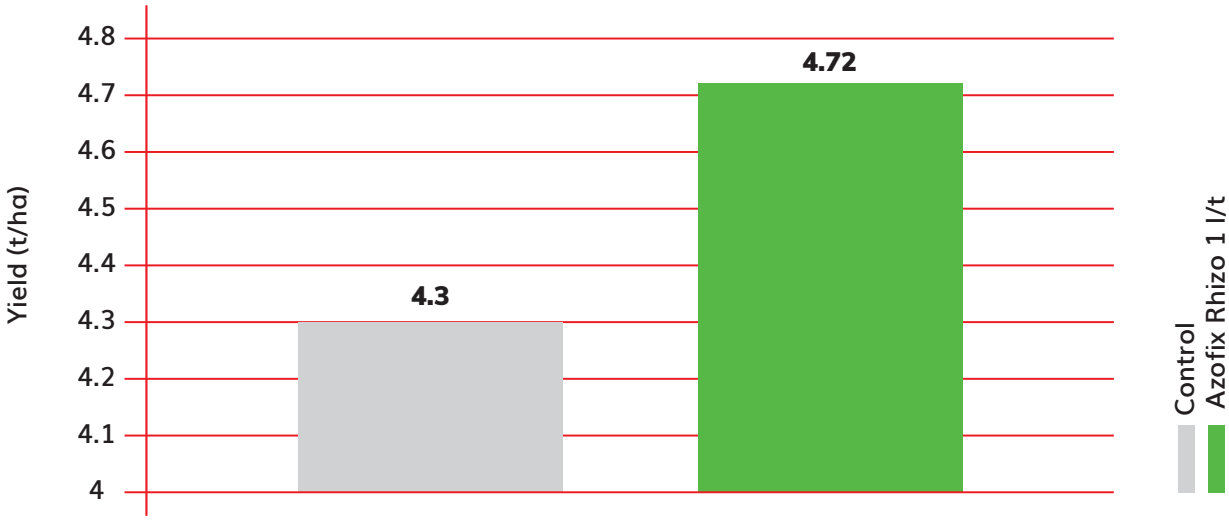
ASU Experimental Center, Beans, 2020

Figure 3.



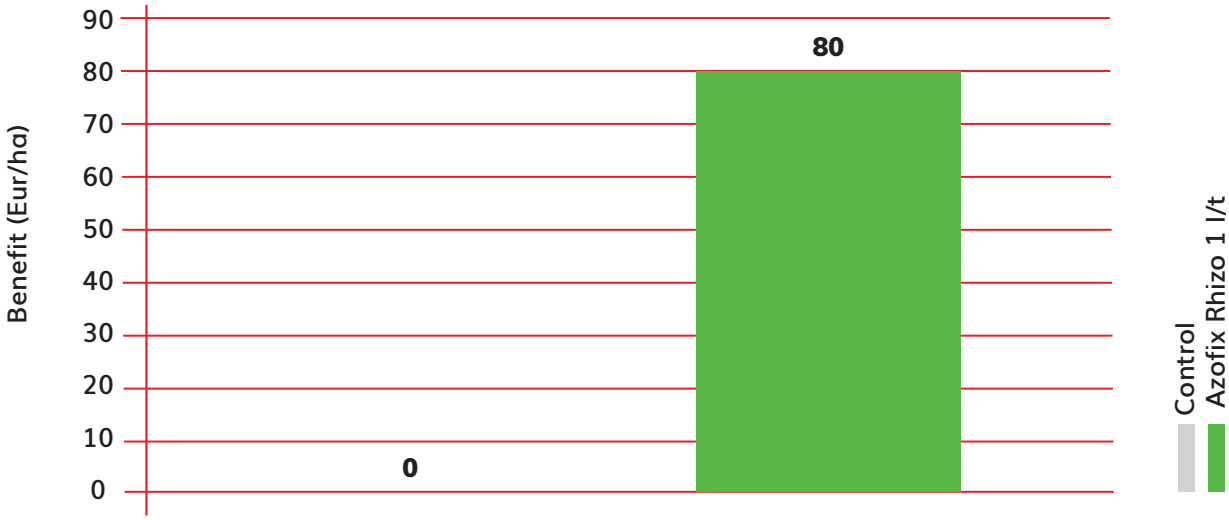
October, 2020. Bean Market Price 244 Eur/t

Figure 4.



ASU Experiment Center, Peas, 2020

Figure 5.



October, 2020. Peas Market Price 200 Eur/t

Application rate, technology

Application rate: beans: 1-3 l/ha – BBCH 01-10; peas: 1-3 l/ha – BBCH 01-10; seed coating: beans: 1 l/t; peas: 1 l/t.

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

Safety and storage: product can be mixed with all kinds of fertilizers and pesticides unless the manufacturer of fertilizer or pesticide states otherwise. May contain natural sediments. Storage at high temperature above 30 °C must be avoided. Use Azofix Rhizo as soon as possible after opening or store in the refrigerator (4 °C) once it is opened and use it within 72 h. Contamination of the product may occur at any time after opening and the manufacturer takes no responsibility for opened and unused product.

Product is non-toxic and has no irritating compounds. There is no risk to humans, animals and the environment. After contact with the skin or eyes, wash with running water. Microorganisms may have the potential to provoke sensitising reactions.

Specifications

Composition: *Rhizobium leguminosarum* MVY-018 (1.2×10^{12} CFU/l), Ca-687 mg/l; K-253 mg/l; S-244 mg/l; Na-243 mg/l; P-220 mg/l; Mg-21.9 mg/l.

Packaging: 20 l; 10 l; 5 l; 1 l.

- **Biological activity:** biological fixation of atmospheric nitrogen; symbiotic microorganism;
- **Physical state:** liquid biological product;
- **Viability, shelf life:** 3 months. The manufacturer does not recommend storing the product above 30 °C.
- **Working conditions:** 5-32 °C soil temperature; 5.5 to 9 pH;
- **Chemical parameters:** dry matter 4.1%; pH 6.8; organic matter 69.4%;
- **Physical parameters:** colour from light grey to grey; dynamic viscosity 0.8 mPas; density 1.06 g/cm^3.

Manufacturer: "Bioenergy LT", Staniunu str. 83/1, LT 36151 Panevezys, Lithuania.

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