BACTO-K

FOR HEALTHY SOIL

ECOCERT – Registered
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LV – No. 10.03 – 1829 – 19
BE – No. EM735.H
KZ – No. KZ54VCF00005210

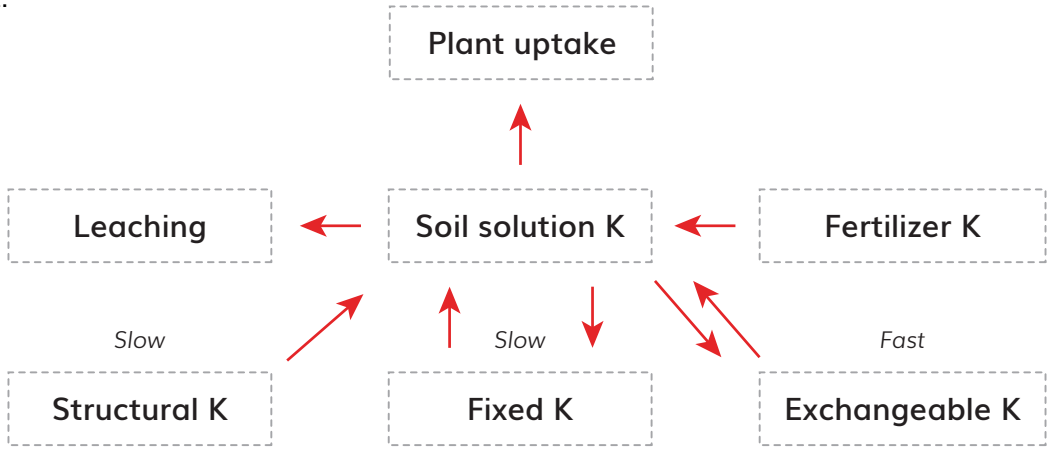
BIO ENERGY LT

APPROVED FOR ORGANIC FARMING

Introduction

Potassium improves a plant's ability to absorb and retain soil moisture, therefore improves the plant resistance to droughts. Assuring that plants have no shortage of potassium, leads to effective photosynthesis and plants produce more amino acids.
When the root system is strong and well developed, it is more efficient in symbiosis with microbials, increasing better resistance to diseases and accordingly leads to better plant health. Potassium is a part of soil sorption complex, meanwhile, absorbed potassium is hardly assimilated by plants and the lack of this element becomes a problem for the plant with clearly expressed characteristics. Optimal potassium balance enables plants to use solar energy efficiently by chlorophylls and accelerates sugar transportation inside the plant.

Figure 1.



Challenges

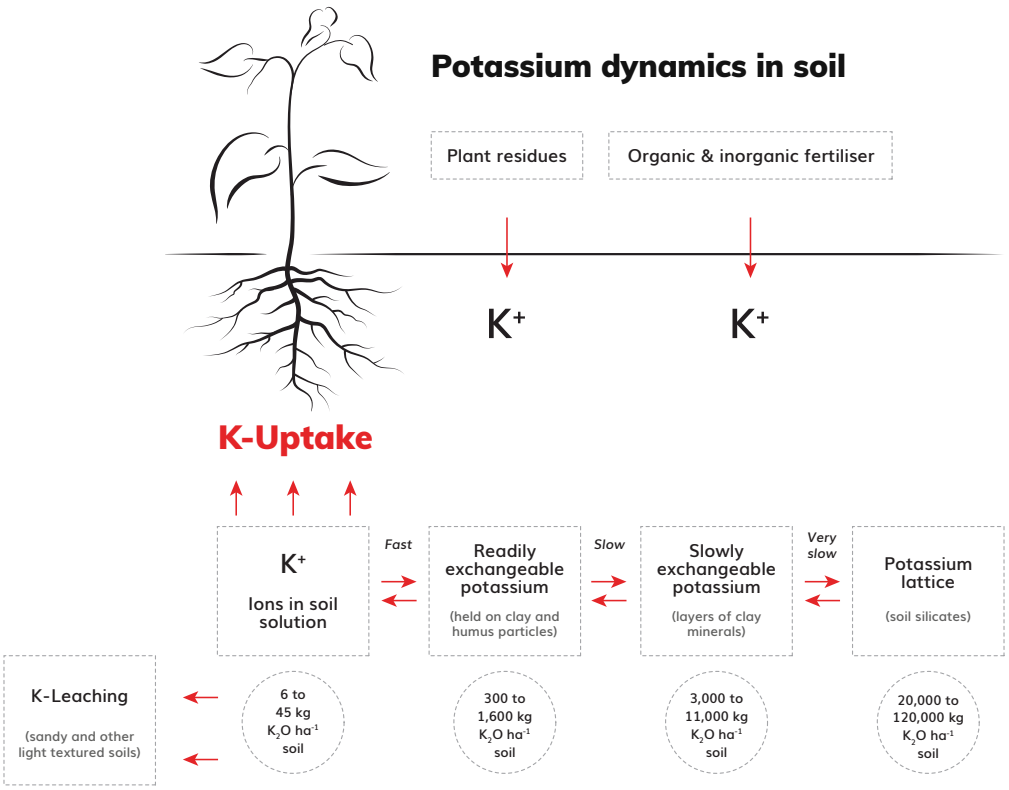
Potassium is one of the key elements in plant nutrition. There are many forms of potassium in the soil, some of them are unavailable for plants. Plants cannot uptake insoluble potassium. Potassium deficiency leads to the accumulation of mineral nitrogen in the leaves of plants that has not been converted into organic compounds. Potassium deficiency makes plants susceptible to drought, causes them to wilt earlier and disrupts normal metabolism and natural plant health. In order to respond to those problems, biological products for potassium mobilization are widely used.

Solution

Bacto-K – plant microbial biostimulant, for optimal potassium uptake.

Registration information and certificates
Suitable for: cereals, rapeseed, corn, sunflower, sugar beet, vegetables, fruit trees, fruit bushes, berries.

Figure 2.



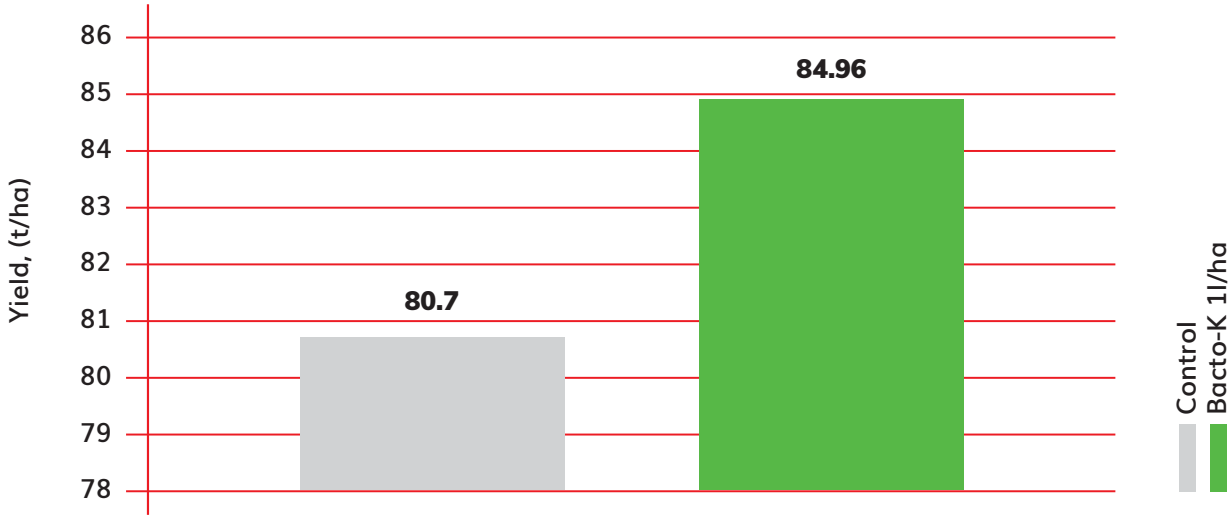
Mode of action

Active microorganisms exude enzymes, which decompose silicates and other compounds, and mobilizes potassium in forms that plants can easily absorb. The bacteria produce biologically active substances, stimulating plant growth and development.

Benefits and Results

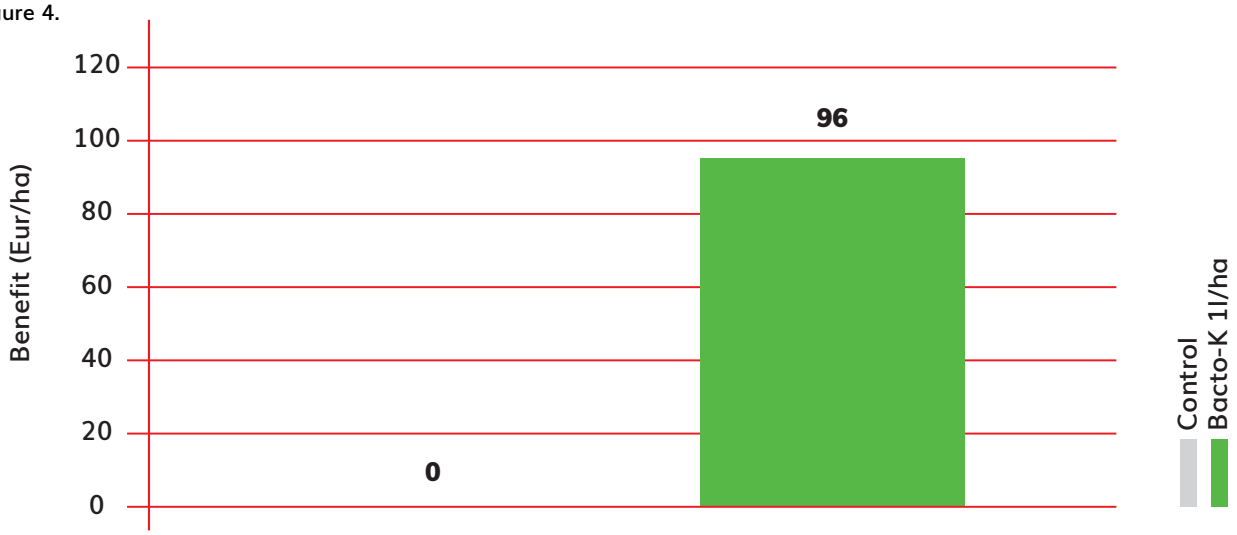
- Improves better potassium assimilation, up to 40 kg/ha of active ingredient;
- Increases resistance to droughts and frost;
- Accelerates photosynthesis;
- Improves better potassium balance in the soil;
- Enhances higher yield and quality.

Figure 3.



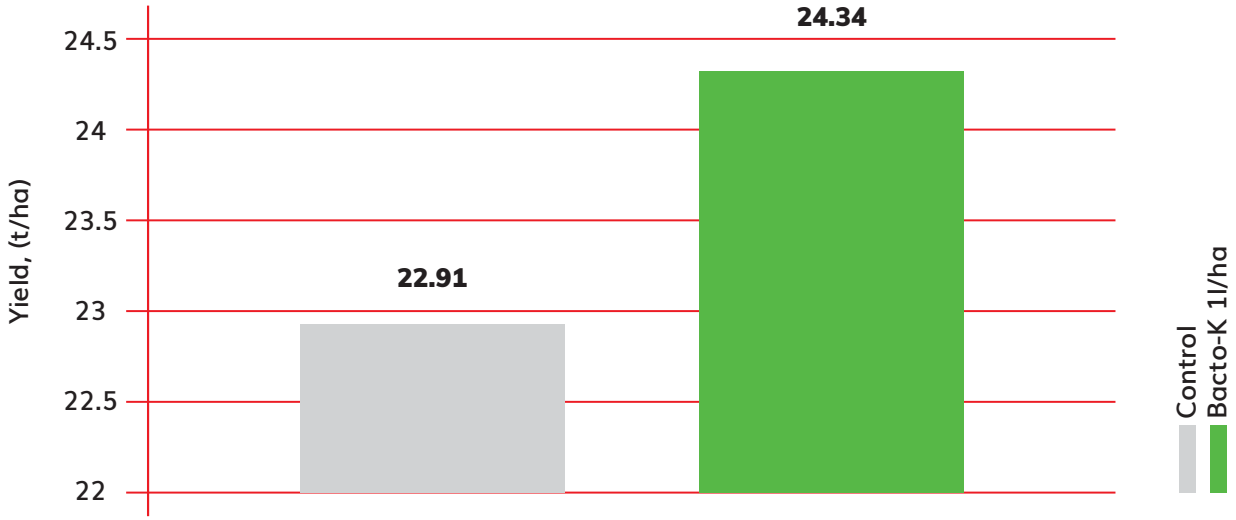
LAFSC, Rumokai Experiment Station, Sugarbeets, 2018

Figure 4.



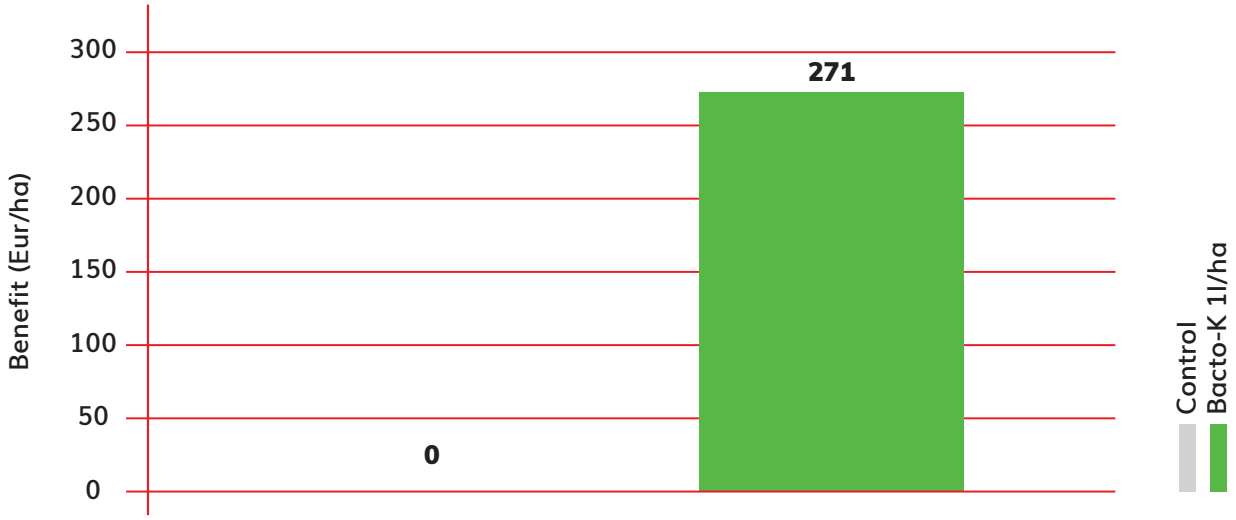
October 2018. Sugarbeet Price, 26 Eur/t

Figure 5.



LAFSC, Vezaiciai Experiment Station, Potatoes, 2019

Figure 6.



September 2019, Potatoes Price 200 Eur/t

Application rate, technology

Application rate: cereals: 1-3 l/ha – BBCH 01-30; rapeseed: 1-3 l/ha – BBCH 01-30; corn, sunflower: 1-5 l/ha – BBCH 01-16; sugarbeet: 1-3 l/ha – BBCH 01-16; vegetables: 1-5 l/ha – BBCH 01-40; fruit trees, fruit bushes: 1-4 l/ha – BBCH 01-59, on the soil before planting or until flowering; berries: 1-3 l/ha – BBCH 01-59, on the soil before planting or until flowering.

Application time: spray on to the soil before sowing or until the plants do not cover the whole soil surface. In other cases it is recommended to consult with a sales representative.

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 Bacto-K 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: *Bacillus megaterium* MVY-011 (1.2×10^{12} CFU/l); Na-4623 mg/l; S-2808 mg/l; K-1729 mg/l; P-723 mg/l; Mg-137 mg/l; Ca-134 mg/l.

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

- **Biological activity:** product is intended for potassium solubilisation to forms, available for plants; free living microorganisms;
- **Physical state:** liquid biological product;
- **Viability, shelf life:** 12 months. The manufacturer does not recommend storing the product above 30 °C.
- **Working conditions:** 5-44 °C soil temperature; 4.5 to 10 pH;
- **Chemical parameters:** dry matter 7.3%; pH 6.4; organic matter 80.5%;
- **Physical parameters:** colour from dark brown to black; dynamic viscosity 0.7 mPas; density 1.07 g/cm^3.

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

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