

- Specification Sheet -

Bactilis

Bactilis is a liquid microbial inoculant containing beneficial soil bacteria of the genus *Bacillus* in the endospore form. When the endospores are applied in the soil, they are activated and the bacteria that occur start proliferating, resulting in the increase of their populations. At the same time, the beneficial bacteria of **Bactilis** contribute to the development of a healthy and fertile soil, promote the root and the plant growth and also fortify the plant resistance against soil pathogens.

Bactilis contains the bacterial species:

- i. ***Bacillus pumilus***
- ii. ***Bacillus amyloliquefaciens***
- iii. ***Bacillus subtilis***
- iv. and also the bacterial strain ***Bacillus subtilis GBO3***.

The beneficial bacteria of **Bactilis** are in an excellent, rich in plant nutrients liquid substrate that contributes to the establishment of the bacteria on the plants' root and also stimulates the microbial activity.

PROPERTIES AND USES:

- Contributes to the development of a healthy root system since the beneficial bacteria of **Bactilis** secrete substances that promote both the root's growth and the plant's health (Plant Growth Promoting Rhizobacteria: PGPR).
- Stimulates the cell divisions in the root and thereby **Bactilis** promotes the elongation and the expansion of the root.
- Increases the available to the plants soil nutrients since the beneficial bacteria of **Bactilis** degrade the dead organic matter of the soil and convert it into a form that is directly assimilated by the plants.
- Supplies the plants with macro- and micro- nutrients in a readily assimilated form.
- Improves the soil structure and develops an ideal environment for the growth of vigorous and high yield crops.
- Improves the physicochemical properties of the soil.
- Prevents the invasion and the establishment of the soil pathogens on the plants' root because ***Bacillus subtilis*, *Bacillus pumilus*, *Bacillus subtilis GB03* and *Bacillus amyloliquefaciens*** secrete substances that create an adverse environment for the pathogens' growth.
- Acts as a protective shield for the root because the beneficial bacteria of **Bactilis** compete with the soil pathogens for space and nutrients, inhibiting their installation and proliferation on the root system of the plant.
- Reinforces the defence mechanisms of vegetables, grass, ornamentals, herbs and trees, since ***Bacillus subtilis GB03*** in cooperation with ***Bacillus pumilus*** trigger the defence mechanisms of the plants.

- Fortifies the resistance of the plants against the environmental stress factors due to substances (e.g. salicylic acid) that are secreted by ***Bacillus pumilus***.

APPLICATION:

Since **Bactilis** is a homogenous solution that is 100% water soluble, it can be applied through all drip irrigation systems and sprayer systems. It is most effective as a soil drench or a soil surface sprayer.

Application Rate: Generally it is applied at the following application rate.

Soil application: 2-10 l/ha

STANDARD ANALYSIS

	(w/w)	(w/v)
Nitrogen (N)	3.01 %	3.43 %
Phosphorus (P ₂ O ₅)	0.72 %	0.82 %
Potassium (K ₂ O)	1.39 %	1.59 %
Calcium (CaO)	0.24 %	0.27 %
Magnesium (MgO)	0.05 %	0.06 %
Sulphur (S)	0.03 %	0.03 %

OTHER INGREDIENTS

	cfu (colony forming units)/lt
<i>Bacillus subtilis</i>	1x10 ¹⁰
<i>Bacillus subtilis</i> GB03	5x10 ⁹
<i>Bacillus pumilus</i>	5x10 ⁹

PHYSICAL PROPERTIES:

Appearance:	Fine brown-black fluid
Density:	1.14 g/ml
Solubility:	100% water soluble
pH:	4.0 – 4.5