

Bactilis



MICROBIAL INOCULANT - ORGANIC FERTILIZER SOIL AMENDMENT

Bactilis is a microbial inoculant containing beneficial soil microorganisms of the genus *Bacillus* in a rich in nutrients liquid substrate. **Bactilis** contains the bacterial species:

- *Bacillus pumilus*,
- *Bacillus subtilis*,
- and also the bacterial strain *Bacillus subtilis GB03*

The beneficial bacteria of **Bactilis** are inside the product in the form of endospores which are activated in the soil and the bacteria that occur start proliferating resulting in the increase of their population. Simultaneously the bacteria of **Bactilis** create a healthy environment in the soil, promote the root and plant growth and also enhance the defense of the plant against soil pathogens.

In specific *Bacillus subtilis* & *Bacillus subtilis GB03* bacteria:

- Interfere with the invasion and the establishment of the soil pathogens in the root of the plant. *Bacillus subtilis* & *Bacillus subtilis GB03* colonize the entire root system of the plant and compete with the soil pathogens for space and nutrients. Furthermore, they release substances which create an adverse for the growth of the pathogens environment.
- Enhance the defense system of the plant. Bacteria *Bacillus subtilis GB03* secrete substances (lipopeptides), which inhibit the growth of the pathogens and also improve the defense mechanism of the plant.
- Contribute to the formation of a healthy root system due to the substances (similar to auxins and cytokinins) that they release which stimulate the plant and root growth.
- Increase the available to the plants soil nutrients since they degrade the dead organic matter and convert it to a form readily available to the plants.
- Improve soil structure by creating an ideal environment for the growth of vigorous and highly productive crops. The microbial activity of *Bacillus subtilis* & *Bacillus subtilis GB03* contributes to the creation of a healthy and fertile soil.

Beneficial bacteria *Bacillus pumilus* coordinate with the bacteria *Bacillus subtilis* & *Bacillus subtilis GB03* and enhance all the above mentioned properties.

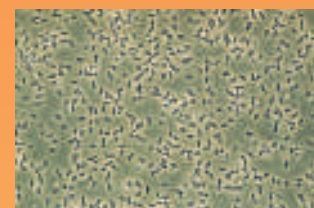
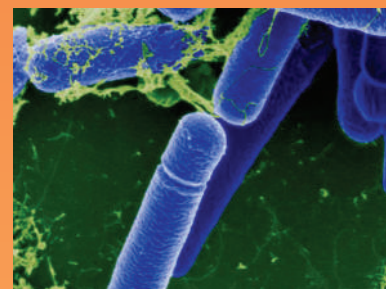
Specifically the bacteria *Bacillus pumilus*:

1. Prevent the establishment of the soil pathogens on the root of the plant since they cover the entrance gates of the pathogens in the root.
2. Increase the available to the plants soil nutrients.
3. Improve the structure of the soil and increase its aeration.
4. Contribute to the growth of a healthy root system which enhance the water and nutrient uptake by the plants.
5. Reinforce the resistance of the plant against environmental stress factors because of their secreted substances (e.g. salicylic acid) which enhance the defense system of the plant.

The product is available in two forms.

In the form of water soluble powder (**Bactilis-S**): Contains beneficial microorganisms in a lyophilized form in a suitable medium, which ensures the easy and rapid dispersion of microorganisms in the soil and the root system of the plant.

In the liquid form (**Bactilis**): Contains beneficial microorganisms in a rich in nutrients substrate which stimulates the microbial activity and contributes to the healthy growth of the plant. The liquid substrate of **Bactilis** offers natural growth factors (cytokinins, auxins, gibberellins), amino acids, monosaccharides and polysaccharides, vitamins (including Ascorbic acid - vitamin C and the complex of vitamins B), trace elements, humic and fulvic acids and plant oils. Due to its ingredients that it offers, the substrate of **Bactilis** increases the soil nutrients and makes them available to the plants.



CROP	APPLICATIONS	APPLICATION RATE Bactilis / Bactilis-S
Legumes, Leafy vegetables, Celery, Onions, Herbs Aromatic plants	At sowing or transplanting	2-5 l per ha / 50-100 g per ha
Tomatoes, Peppers, Fruit vegetables	At transplanting. Repeat every 14-28 days	2-5 l per ha / 50-100 g per ha
Melons, Cucumbers and other cucurbits	At transplanting. Repeat every 14-28 days	2-5 l per ha / 50-100 g per ha
Strawberries	At transplanting. Repeat every 14-28 days	2-5 l per ha / 50-100 g per ha
Trees, Vineyard	Every 7-14 days. 20-30 applications throughout the year	5-10 l per ha / 100-200 g per ha
Nurseries	Water the discs, frames or pots after planting	1-2 ml per l of water / 20 g per 500-1,000 l of water
Shrubs, Bushes, Vine plants	At transplanting by drenching the rootsphere	0.5 l per 100 l of water / 10 g per 100 l of water
Lawn	Dillute in an appropriate amount of water and spray every 21-28 days	10 l per ha / 200 g per ha
Hydroponics	Run through the system	40 ml per 100 l of water / 10 g per 1,000 l of water
	Replenish each time you add water	15 ml per 100 l of water / 5 g per 1,000 l of water
Ornamentals	At transplanting. Repeat every 14-28 days	15-30 ml per 4 l of water / 20 g per 100 l of water
APPLICATION RATE FOR SPRAYING IN NURSERY		
Ratio 1:100	120 ml Bactilis in 100 l of water. When nessecary, repeat every 14 days	

It is recommended **BACTILIS** to be combined with **BACTA-FOOD**, which is an excellent nutrient source for the beneficial microorganisms of the product. **BACTA-FOOD** activates the beneficial microorganisms of **BACTILIS**, which fall into from the form of endospore (germinate) to the form of vegetative cells and start proliferating increasing their number in this way. Furthermore, it ensures the rapid establishment of the microorganisms in the root system of the plant and the activation of their microbial activity. Consequently **BACTA-FOOD** achieves both the immediate activation of the microorganisms of **BACTILIS** and their excellent action.



STORAGE: The product must be stored in normal room conditions.

IT MUST NOT FREEZE.

LIFE EXPECTANCY: Life expectancy is more than 2 years.



HUMOFERT



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