

Soya-Starter



Soya-Starter is a microbial inoculant specially designed for soya plants. It contains 2×10^9 cfu*/g population of the beneficial bacteria *Bradyrhizobium japonicum* in latency and comes in both powder and liquid form. **Soya-Starter** is applied on the soya seeds prior to planting in order the beneficial symbiotic to the soya plant bacteria of the genus *Bradyrhizobium* to be established in the roots of soya. The species of *Bradyrhizobium japonicum* which are included in the **Soya-Starter** are required for the development of the soya plant since they bind the atmospheric nitrogen and convert it into assimilable for the soya form throughout the growing period.

PROPERTIES

- Increases the germination of the seeds.
- Stimulates the emergence of the soya seeds.
- Promotes the development of the soya.
- Enhances the yield of the soya plant.
- Promotes the development of the root system.

Nitrogen-fixing bacteria are usually soil bacteria which are either free-living or symbiotic with plants and play a very important role in the nitrogen cycle. The free-living nitrogen-fixing bacteria bind the molecular nitrogen of the atmosphere and convert it to ammoniac ions in the soil. Then, the ammoniac ions undergo the nitrification process and finally the arising nitrate ions are absorbed by the plants. As for the symbiotic nitrogen-fixing bacteria, they also bind the atmospheric nitrogen and convert it to ammoniac ions, but in this case the bacteria provide the nitrogenous compounds to the plants. Thus the plants can be directly supplied with nitrogen in order to synthesize their proteins, vitamins and other nitrogenous compounds.

What do Nitrogen-fixing bacteria offer to plants?

- They bind the atmospheric nitrogen, convert it to an assimilable for plants form and provide it to plants increasing in this way the crop yields.
- They increase seed germination. Studies have shown that seeds which have been treated with nitrogen-fixing bacteria have shown an increase in their germination rate by 20-30%.
- They contribute to the formation of a better soil structure.
- They have a positive effect on the growth of the root system.
- Symbiotic nitrogen-fixing bacteria occupy positions on the root inhibiting the plant pathogens' establishment on the root.
- They secrete substances (through the metabolism), which either have an anti-fungal action or reinforce the defense of the plant against soil pathogens.



APPLICATION

Soya-Starter is applied directly on the soya seeds through spraying or mixing after it has been dissolved in an appropriate amount of water. It is very important a uniform and full coverage of the seeds to be achieved. For this reason the application rate must not exceed 60 g of **Soya-Starter** for inoculating 50 lbs (22.6 kg) of soya seeds.

*cfu: colony forming units

Produced by

