



Approved Input for organic agriculture
Attested by ECOCERT-India Pvt.Ltd./NPOP/
NAB/002 as per NPOP/EC/NOP regulations

P-Sol

Phosphate Solubilizing Bacteria

Phosphorus is one of the major plant nutrients dominant in alkaline soils, a greater part of soil phosphorus (95 – 99%) is present in an insoluble form and hence is unavailable to the plant.

Phosphate solubilizing microorganisms are capable of solubilizing Ca, Al, Fe phosphates as well as rock phosphates and mineralizing organic phosphorus, making the phosphorus present in the soil available to the crop. [↑ 15%]

The bound form of phosphate is made available to the crop by certain bacteria and fungi which solubilize phosphates.

To increase the availability of phosphorus, large amounts of phosphate fertilizers are used on a regular basis, but after application, a large portion of the phosphorus is quickly converted to the insoluble form and **only about 20-25% of the applied phosphorus is useful.**

Phosphate solubilizing microorganisms play an important role in supplementing phosphorus to the

plant, allowing the sustainable use of phosphate fertilizer and hence increasing crop yield.

Advantages:

- Fortifies the soil with bacterial metabolites.
- Has the ability to solubilize and cause uptake of native and applied phosphorus.
- The organic acids (citric acid, oxalic acid, succinic acid, tartaric acid, malic acid) increase the availability of phosphorus in the rhizosphere by causing the breakdown of Ca – Phosphate bonds which releases the phosphate ion.
- **P-Sol** therefore not only helps show a reduction in phosphorus resources, but also helps to reduce environmental pollution which results from chemical residues.
- Replaces chemical phosphorus by 25% in addition to stimulating plant growth.
- It can provide protection against drought and some soil borne diseases.



Dosage:

Soil application: 1 Litre of **P-Sol** to be mixed with 1 ton of Organic Manure & applied in 1 hectare of land.

Seed treatment: 5 ml to 7 ml per kg of seed.

Seedling dipping: Mix 50 ml – 70 ml in 15 liters of water & dip the seedling for 10 minutes before transplanting

Tree treatment: Dilute and spray @ 200 ml/acre.

