

Technical Data Sheet

Bacillus megaterium

High-Performance Biofertilizer with Advanced Phosphate Solubilization

Bacillus megaterium is a high-performance soil probiotic and plant growth-promoting rhizobacterium (PGPR) selected for its exceptional ability to solubilize phosphate, enhance nutrient uptake, and improve soil fertility. This beneficial microbe converts insoluble phosphorus into plant-available forms, promoting stronger root systems, improved crop vigor, and greater yield potential. It also produces beneficial enzymes, amino acids, and phytohormones that support microbial balance, plant development, and stress resilience in challenging soils.

- Solubilizes bound phosphate to boost nutrient uptake
- Improves nitrogen cycling and fertilizer efficiency
- Supports plant health and natural defense pathways
- Stimulates root and shoot growth via phytohormones
- Enhances tolerance to salinity, drought, and heavy metals

Technical Data

Concentration (CFU/g):

- 100 billion (1.0×10^{11}) CFU/g dry powder
- Custom concentrations available upon request

Particle Size (Mesh):

- Passes through 100 mesh sieve

Packaging Options:

- 22 lb (10 kg) pails
- 44 lb (20 kg) pails
- 340 lb (155 kg) drums
- Smaller custom packaging available on request

Shelf-life:

- 1.5 years at room temperature
- 2+ years refrigerated

Storage Recommendations:

- Store in a cool, dry location away from direct sunlight.
- Reseal container tightly after each use.

Application Rates

Soil Application (Drip, Drench, or Fertigation)

Dosage:

- 100–200g per acre (250–500g per hectare)
- Typically applied 1–3 times per crop cycle

Frequency:

- Apply during early root establishment or transplanting
- Reapply every 2–4 weeks during active growth stages as needed

Application Method:

1. Dissolve powder thoroughly in water (use enough water to reach the root zone)
2. Use an agitation tank or manual stirring to maintain microbial suspension
3. Apply through drip irrigation lines, micro-sprayers, or fertigation systems, positioning flow as close to the root zone as possible
4. Flush the system after application to prevent clogging or residue buildup

Do not tank mix with herbicides, fungicides, bactericides, or chemical pesticides.

In-Furrow

Dosage:

- 20–40 g per acre (50–100 g per hectare)

Frequency:

- Apply once at planting to target root initiation and early growth stages.

Application Method:

1. Dissolve microbial powder thoroughly in water.
2. Apply directly into the seed furrow or planting trench at seeding time.
3. If using irrigation systems for delivery, ensure solution contacts the root zone.
4. Maintain agitation to prevent settling.

When tank-mixing with fertilizers:

- Dilute fertilizer fully in water first before adding *Bacillus megaterium*
- Do not mix with herbicides, fungicides, bactericides, or pesticides

Seed Treatment

Dosage:

- 5–10 g per kg of seed

Frequency:

- Apply once, immediately prior to sowing, to maximize early colonization.

Application Method:

1. Mix *Bacillus megaterium* powder evenly with a sticking agent or adhesive solution.
2. Coat seeds uniformly and allow them to dry gently in the shade before planting.

Disclaimer: Results may vary depending on environmental conditions, application rates, and management practices. The manufacturer makes no guarantee of specific results. Seller's liability is limited to replacement of product or refund of purchase price. Manufacturer is not responsible for misuse, mishandling, or application under adverse conditions beyond its control. This product is not registered for pesticidal use with the U.S. Environmental Protection Agency. It is intended as a soil amendment / microbial inoculant only. Keep out of reach of children.