Technical Data Sheet

Bacillus subtilis

Advanced Biofertilizer for Plant Health & Nutrient Uptake

Our Bacillus subtilis powder biofertilizer is a high-CFU, spore-forming plant growth-promoting rhizobacterium (PGPR) used in agriculture to enhance soil health, crop performance, and abiotic stress tolerance. Through nutrient solubilization, phytohormone production, and natural immune priming, this microbial inoculant supports resilient plants in stress-prone environments or regenerative systems.

- Supports natural plant defense responses (SAR/ISR)
- Promotes root growth and early crop establishment
- Enhances phosphorus and micronutrient availability
- Contributes to soil microbial balance and biodiversity
- Improves plant tolerance to drought, salinity, and heat stress

Technical Data

Concentration (CFU/g):
- 200 billion (2.0×10^{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
- 42 lb (19 kg) pails
- 331 lb (150 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:

- 50–100 grams per acre (125–250 grams per hectare)

Frequency:

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

Application Method:

1. Dissolve 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.

Foliar Spray

Dosage:

- 25–50 grams per acre (60–120 grams per hectare)

Frequency:

- Begin at vegetative or pre-flowering stages
- Reapply every 7–14 days, especially during periods of high stress

Application Method:

1. Apply in the early morning or evening to reduce UV exposure
2. Use a non-ionic surfactant or wetting agent for improved adhesion
3. Ensure thorough coverage of foliage, including undersides of leaves
4. Agitate spray solution continuously during application

In-Furrow

Dosage:

- 10–20 grams per acre (25–50 grams 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 subtilis
- Do not mix with herbicides, fungicides, bactericides, or pesticides

Seed Treatment

Dosage:

- 3–5 grams per kg of seed

Frequency:

- Single application before planting

Application Method:

1. Mix thoroughly with a sticking agent (e.g., sugar solution, gum arabic)
2. Coat seeds evenly, ensuring full surface coverage
3. Allow seeds to dry gently in the shade before sowing

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.