APPLIED BIOTECH INDUSTRIES

Technical Data Sheet

Brevibacillus laterosporus

Soil Inoculant for Enhanced Resilience in Pest-Challenged Crops

Brevibacillus laterosporus is a spore-forming plant growth-promoting rhizobacterium (PGPR) used in regenerative and conventional farming systems. As a biofertilizer, biostimulant, and soil probiotic, this beneficial bacteria for plants enhances crop health, root health, and nutrient access while supporting microbial balance in the rhizosphere. Ideal for use in organic farming, it contributes to resilient plant performance through its activity as a soil inoculant and promoter of phosphate solubilization and abiotic stress tolerance.

- Root health and microbial balance in pest-prone soils
- Phosphate solubilization and micronutrient mobilization for improved nutrient uptake
- Plant resilience under abiotic stress, including drought and salinity
- Beneficial enzymes and metabolites that foster rhizosphere stability

Technical Data

Concentration (CFU/g):
- 50 billion (5.0 × 1010) CFU/g dry powder
- Custom concentrations available upon request

Particle Size (Mesh):
- Passes through 100 mesh sieve

Packaging Options:
- 13 lb (6 kg) pails
- 26 lb (12 kg) pails
- 220 lb (100 kg) drums
- Smaller custom packaging available on request

Shelf-life:
- 1 year 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:

- 100–200 grams per acre (250–500 grams per hectare)

Frequency:

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

Application Method:

- Dissolve thoroughly in water (ensure enough dilution volume to fully saturate the root zone)
- Use an agitation tank or manual stirring to maintain microbial suspension
- Apply through drip irrigation lines, micro-sprayers, or fertigation systems, positioning flow as close to the root zone as possible
- Flush the system after application to prevent clogging or residue buildup
- Do not tank mix with herbicides, fungicides, bactericides, or chemical pesticides

Seed Treatment

Dosage:

- 10-20 grams per kg of seed

Frequency:

- Single application before planting

Application Method:

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

In-Furrow

Dosage:

- 25–50 grams per acre (60–125 grams per hectare)

Frequency:

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

Application Method:

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

When tank-mixing with fertilizers:

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

Foliar Spray

Dosage:

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

Frequency:

- Apply during vegetative growth or periods of high stress or pest pressure
- Reapply every 7-14 days during periods of high stress

Application Method:

- Apply in the early morning or evening to reduce UV exposure
- Use a non-ionic surfactant or wetting agent for improved adhesion
- Ensure thorough coverage of foliage, including undersides of leaves
- Keep spray solution agitated throughout application to prevent settling