



SOIL ACTIVATOR USER GUIDE

Specifications

Guaranteed Microorganisms

<i>Bacillus subtilis</i>	2.48x10 ⁸ cfu/g
<i>Bacillus amyloliquefaciens</i>	5.00x10 ⁶ cfu/g
<i>Pseudomonas monteilii</i>	1.0x10 ⁶ cfu/g

Technical characteristics

Density	0.38-0.5 g/cc
pH	6 – 9*
Maximum solubility	300 g/L @ 20°C
Recommended water mixing ratio	Up to 50 g/L water
Storage	Up to 3 years (5 – 25°C)
Handling	No special precautions required

* NOTE: Soil Activator is manufactured with natural ingredients. Variation in pH between lots will not affect performance.

Electrical Conductivity

Concentration (g/L)	Electrical Conductivity (ms/cm)
5	1.71
10	3.10
15	4.43
20	5.70
30	8.06
40	10.18
50	12.07

General Guidelines

- Not crop or soil specific: compatible with all crops and soils
- Apply once per growing cycle, as part of a balanced fertilization program
- Effective in conventional and organic production systems
- Approved for organic farming

Application Methods

Field Application, Dry

- *Mix with dry fertilizer:* In a separate container from the application equipment, add product to fertilizer and mix thoroughly until evenly mixed. For granular products, use up to 3 kg per 100 kg of fertilizer.
- *Seed inoculation:* Use up to 1 kg per 100 kg of seed. In a separate container from the planting equipment, apply just enough water to seed to slightly dampen. Mix damp seeds thoroughly with Soil Activator until they are evenly coated. Allow seeds to dry before further handling.
- *Transplanting:* apply dry powder directly to each hole based on planting density and the size of the hole

Field Application, Wet

- Ideal pH for mixture: between 5.0 and 8.5
- *Drench application is recommended:* Use up to 50 g per L of water. Mix with water and apply directly to soil surface as a drench. Use flood-type nozzles for large droplet size and good soil penetration.

Other options

- *Mix with organic matter (compost, manure, etc.):* Apply to fresh manure just prior to application to prevent heating of the pile. Apply to compost after composting process is complete, ideally 2 – 4 weeks prior to field application. Do not apply Soil Activator prior to composting heat cycles
- *Mix with growing media:* ideally 24-48 hours before seeding or planting (maximum 4 weeks before)
- *Transplant root dip:* Mix Soil Activator with water, 10 g/L, and soak transplant roots for up to 4 hours prior to transplanting. Roots do not need to be rinsed prior to dipping

Questions?



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Application doses

Use general instructions for each category unless specific crop is listed

Note: Rates for broadcast application are different from concentrated bands (on-row, on-seed, in-furrow, side-banded, etc.)

CROP	RATE	TIMING	NOTES
Field Crops			
General instructions barley, cotton, dry beans, maize, millet, sorghum, soybean, wheat, etc.	3-4 kg/ha band 10 kg/ha broadcast	At planting	
Rice	4 kg/ha with seed 10 kg/ha broadcast 1 g/L soil in nursery	At planting or Fertilization	Apply before paddy is flooded where possible
Peanut	3-4 kg/ha banded 10 kg/ha broadcast	At planting or fertilization	
Sugarcane	25 kg/ha banded	Late tillering	
Field vegetables and fruits			
General instructions Broccoli, carrots, chilli, cucurbits, onions, peppers, tomatoes, etc.	10 kg/ha banded	At transplanting	
Pineapple	10 kg/ha banded	Transplanting and every 6 months	For ratoon crops, make the first application 30 days after harvest.
Potato	3 kg/ha banded	At emergence	Use drench method directly on hills with enough water for good soil penetration
Flowers			
Greenhouse production (roses, clavel, pompon, etc.)	2.5 g/m of bed	Once per production cycle	Use drench method for best results
Field production (astromelia, etc.)	10 kg/ha banded	Planting	Use drench method for best results
Small and herbaceous perennials			
General instructions berries, grapes, lulo, strawberries, etc.	10 kg/ha banded	Pre-flowering	Use drench method at the base of plants
Blueberries (and other acid-soil crops)	25 kg/ha banded	Pre-flowering	Use drench method at the base of plants
Hay, pasture, and turf	10 kg/ha broadcast	Seeding or spring	Use drench method to penetrate into root zone
Large perennials			
General instructions apple, avocado, citrus, hazelnut, mango, papaya, tree tomato, etc.	25 kg/ha	Pre-flowering	Apply in a circle around each tree as wide as branches
Banana	25 kg/ha	Every 6 months	Apply in a half circle on the daughter-side of each plant
Cacao	25 kg/ha	Beginning of rainy season	Apply in a circle around each tree as wide as branches
Coffee	25 kg/ha	Early fruit growth	Can be applied every 6 months to maintain production
Oil Palm	See notes	Every 6 months	<i>Apply in circle based on on age of tree:</i> 1st Year: 12 g/tree, 1 m radius 2nd Year: 50 g/tree, 2 m radius 3rd Year: 100 g/tree, 3 m radius
New plantings	10 kg/ha	At transplanting	Apply directly to hole or in ring around base of tree
Other options			
Mixing with compost / organic matter	0.8 kg/tonne	See page 1: <i>Application Methods</i>	Increase the mixing rate when less than 12 tonnes/ha of organic matter will be applied
Mixing with growing media (Greenhouse, hydroponics, etc.)	1.5 g/L	24 – 48 hours before planting	Suitable for soil and soilless substrates

Questions?