

Product Overview

Every plant is a world unto its own. Microscopic organisms inhabit each plant, helping them adapt to disturbance. If disturbed, simple to use microbial products can give plants the advantage; this is what we do at Functional Soils (FS). We are building biology in unnatural places, taking what we know is possible in science and bringing it into the world. After conducting rigorous field science, we find the correct microbes, and synthesize them into safe products for your use. This biotech made accessible. A data-driven scientific solution empowering you to improve plant and soil health.

This product contains several beneficial endophytes, isolated from natural environments, from a genus with no known pathogens. Endophytes are a type of fungus that live in the soil and in the spaces between plant cells, which can form symbiotic relationships with plants, residing in the roots, shoots, and leaves of plants with no apparent negative effects. FS microbes are an economical way to make your plants more adaptable, more resilient, and better supported when stressed.

What can this product do for your plants?

- **Enhance germination:** the product will help break down seed coats, increasing germination when starting trees from seed
- **Increase Root Mass:** more complex root mass allows better use of nutrients and water
- **Nutrient Utilization:** our endophytes increase bioavailability of nutrients and micronutrients to the plant
- **Increase Stress Tolerance:** this product will assist with environmental stressors, such as drought or prolonged heat

Directions for Use

Established Trees and Shrubs

Purpose: Support long-term soil biology, nutrient cycling, and stress tolerance.

Timing: Can be applied anytime. For best results, apply where soil temperature is at or above 6 degrees Celsius.

Method: Soil drench, soil injection, or application through existing irrigation.

1. Determine the application area. This packet, mixed in full, will provide a single treatment for 2 trees of the 6-8' foot range. The same rate would apply for medium to large shrubs.
2. Cut open the pouch. Mix with 10 to 20 L of cold water. Stir vigorously allowing the microbes to fully dissolve and no clumps appear. Use the product within 12 hours.
3. Apply 5-10 L of solution per mature tree, targeting the soil at the base of the tree.

New Trees and Shrubs

Purpose: Establish beneficial microbes in the root zone for faster establishment and improved early growth.

Timing: At planting or within the first month of planting.

Method: Soil/Root drench.

1. Determine the application area. This packet, mixed in full, will treat 1 tree 6-8' range, 2-3 trees on a 3-4' tree, 5-10 trees for 1L pots. The same application rate applied for shrubs
2. Cut open the pouch. Mix with 10 to 20 L of cold water. Stir vigorously allowing the microbes to fully dissolve and no clumps appear. Use the product within 12 hours.
3. Apply equal proportions of liquid to the number of trees you are treating. Target soil at the base of the tree.

Environmental, Storage & Handling Considerations

- Store in a cool (ideally 4–20 °C), dry location out of direct sunlight. Can be kept in freezer.
- Do not expose to temperatures above 35 °C for prolonged periods.
- Keep capsules in sample container when not in use.
- Use capsules within 4 months.
- Heavy chemical inputs (especially broad-spectrum fungicides and some soil sterilants) can reduce microbial populations; allow an interval between such treatments and microbial applications whenever possible.
- For best performance, integrate with: Proper pH management, adequate organic matter, balanced fertilization and irrigation.

Safety & Precautions

- Keep out of reach of children and pets.
- Avoid contact with open wounds.
- Wear standard protective equipment: long sleeves, gloves, and eye protection when mixing and applying.
- Wash hands and exposed skin thoroughly after handling.
- In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice if irritation persists.

Disclaimer

Use only as directed. Performance may vary depending on soil conditions, climate, and management practices. The user assumes all risk from use, storage, or handling of this product when not used according to label directions.

Ready for the next step? Let's talk!

For all product and sales enquiries: info@functionalsoils.com | www.functionalsoils.com