

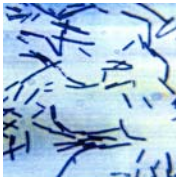
# ACTIVATE™ PMSLA



ALL NATURAL MICROORGANISMS FOR PERMANENT AND ROW CROPS

## FEATURES AND BENEFITS

**ACTIVATE™ PMSLA** is a guaranteed, naturally occurring, beneficial microbial product that enhances the biodiversity of the soil ecosystem. By maintaining a diverse spectrum of beneficial microorganisms in the soil, disease organisms are suppressed, stronger plants and improved yields are seen, as well as improvements in the physical structure of the soil that create an optimum environment for plant growth.



Ongoing lab and field trials have demonstrated the wide range of improvements when **ACTIVATE™ PMSLA** is applied regularly to permanent crops such as trees and vines, as well as row crops, turf, and in nursery growing media. **ACTIVATE™ PMSLA** is a diverse product with a broad range of uses, including fungal disease and nematode suppression, encouragement of beneficial mycorrhizae, it stimulates root growth, encourages stubble digestion and nutrient recycling in the soil, assists in waste water treatment, and works well as a compost starter.



## GUARANTEED ANALYSIS

**ACTIVATE™ PMSLA** contains the following organisms: *Bacillus pumilus*, *B. megaterium*, *B. subtilis*, *B. licheniformis*, and *B. amyloliquefaciens*. Each organism is guaranteed at a concentration of 20 billion cfu's per gram, for a finished product guarantee of 100 billion cfu's per gram. All the bacilli originated in natural soil environments and have not been mutated or genetically engineered.

## ACTIVATE™ MICROBES

**Bacillus pumilus** grows in a pH of 5-10 and produces amylase, protease, cellulase and the highest level of xylanase. It produces antifungal compounds and compounds active



against gram negative bacteria. *B. pumilus* will grow in up to a 5.5% salt solution. **B. megaterium** grows at a pH of 5-10 and produces amylase, protease, and cellulase. It has a very fast germination and growth, less than 1 hour in lab studies. **B. subtilis**



grows at pH 4.5 to 10 and produces the highest enzyme level of all strains for amylase, protease, lipase, cellulase and xy-lanase. It also produces antifungal compounds. **B. licheniformis** grows at pH 5-10 and produces amylase, protease and a higher concentration of cellulase. It grows to a high concentration in waste degradation studies. It is a nitrate reducer and produces antifungal compounds and will grow in up to a 3.5% salt solution. **B. amyloliquefaciens** grows at pH 5.5-10 and produces amylase, protease and cellulase. It grows to a high concentration in waste degradation studies. It is a nitrate reducer and produces antifungal compounds. It can grow in up to a 3.5% salt solution.



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## EASY APPLICATION

**ACTIVATE™ PMSLA** can be applied through flood irrigation, drip systems, micro and overhead sprinklers, blended in fertilizer applications, and other soil applied applications. Rate per application will depend on the crop, soil conditions and cultural practices. Can be blended with most fertilizers by first dissolving into water, then mixing into fertilizer. It is compatible with most fertilizers, but the benefits will be reduced when applied during the use of strong chemicals. Use the following rates for applying **ACTIVATE™ PMSLA** microbes.



**Soil Treatment:** Use 50 to 100 grams (1 3/4 to 3 1/2 oz.) per crop cycle in multiple applications beginning at root flush in the spring. It is most effective when applied with a food supply of Wake Up Organo at a rate of 1/4 per 1,000 square feet.



**Water Treatment:** For sumps, ponds, and hydroponics, use 10 grams per 1,000 gallons of water in the first application and 5 grams every day until the problem is remedied.

**Greenhouse, Turf, and Nursery:** Apply 28 grams (1 oz.) per 5 gallons of water in a spray solution to cover 1,000 square feet. It is most effective when applied with a food supply of Wake Up Organo at a rate of 1/4 per 1,000 square feet.

**Compost:** May be used as an inoculant to start the compost cycle. Use 25 grams per ton of dry matter.

## MAXIMUM SHELF LIFE

**ACTIVATE™ PMSLA** can be stored indefinitely at temperatures between 35° and 86°.