

Emerald Earth

Nature Does It Best

Authorized EM® Retailer

EM® Applications for Turf and Lawn Care

EM® stands for Effective Microorganisms™, an all-natural blend of beneficial microorganisms. EM·1® Microbial Inoculant is made through a natural process of fermentation. Nothing has been genetically altered or chemically engineered. EM·1® is safe and easy to use and is listed as a fully organic product by OMRI. EM Technology® are now being used in over 120 countries, and is resolving a broad variety of environmental problems.

The primary ingredients of Effective Microorganisms™ are comprised of three main genera: phototropic bacteria, lactic acid bacteria, and yeast. These naturally-occurring ingredients work synergistically together to secrete beneficial substances such as vitamins, hormones, enzymes, organic acids, bioactive minerals, and various antioxidants when in contact with organic matter.

Summary of EM® Benefits for Soil Restoration

- Serves as a catalyst to naturally detoxify and enrich the topsoils—which increases plant growth, yield, shelf-life and overall nutritional quality.
- Improvement of soil quality substantially reduces the growth of weeds and herbivore insects, thus gradually eliminating the need for toxic herbicides, pesticides, and synthetic fertilizers.
- Promotes photosynthesis and strengthens the vigor of plants, thus increasing their ability to withstand drought, floods, and temperature extremes.
- Naturally remediates harmful substances—such as heavy metals, salinization, and agrochemicals—while restoring the microbial diversity of the topsoils.
- Increases soil temperature through microbial activity, which enables greater cultivation in colder regions.
- Improves soil aggregation, permeability, and water holding capacity—thus reducing overall water usage.
- Helps prevent the erosion of fertile topsoils—and can even convert desert and sodic environments into arable land.
- Detoxifies, conserves, and improves the overall quality of water and the runoff tributaries.



Many of San Francisco's All-Organic Golf Courses began using EM in 2001

Turf and Lawn Care

There is growing public demand for natural turf management that does not compromise the health of people and the environment. Effective Microorganisms™ represents a viable natural solution that offers a safe and effective alternative to harmful agrochemicals. EM·1® is quickly becoming an important natural tool for the health of residential lawns, city parks, schools, and golf courses.

Since 2001, EM·1® has been utilized by the Integrated Pest Management (IPM) division of the Parks and Recreation Department of the City of San Francisco to reduce turf diseases and trouble spots without the use of dangerous agrochemicals. EM·1® is becoming an important natural technology for the golf course industry to help meet new city government mandates that require an 80% reduction of most fungicides and pesticides.

Recommendations for Turf and Lawn Care

1. Apply Activated EM® with a hose-end sprayer, backpack sprayer, or into the irrigation system about every 7-10 days throughout the growing season.
2. It is recommended to use organic fertilizers and vitamin supplements in combination with EM·1®, which provide a natural food-base for the soil and microbes.
3. Use a "mulching mower" to chop and redeposit the grass clipping. Spray Activated EM® onto the turf after mowing. This enables the clippings to rapidly breakdown into stable organic matter for the soil.

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