

# EM Technology

*“Sustainable society based on co-existence and co-prosperity, exchange of information, and safe, convenient, low cost and high quality food.”*

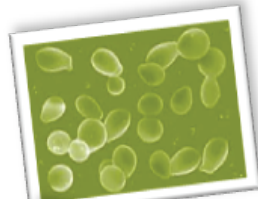
Professor Teruo Higa



## THE MICROORGANISMS

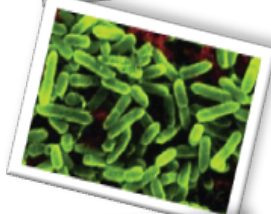
### YEASTS

ferment organic matter and produce vitamins and amino acids. They are used for making bread, beer and wine.



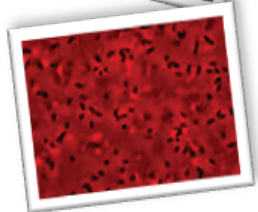
### LACTIC ACID BACTERIA

ferment organic matter, produce organic acids and inhibit pathogens. They are used for making yogurt, cheese and pickles.



### PHOTOSYNTHETIC BACTERIA

maintain the balance with other microorganisms and allow them to co-exist and work together. They transform solar energy into useful energy and is key in odour



## WHAT IS EM?

EM, or **EFFECTIVE MICROORGANISMS**, is a mixed culture of beneficial, naturally-occurring microorganisms mostly used or found in traditional food. EM is made up of three main genera: yeasts, lactic acid bacteria and photosynthetic bacteria. When in contact with organic matter, these effective microorganisms secrete beneficial substances such as vitamins, organic acids, chelated minerals and anti-oxidants. During the **FERMENTATION**, harmful substances and bad odour are also removed.

**EM TECHNOLOGY** was developed more than 20 years ago by Professor Teruo Higa at the University of Ryukus in Okinawa, Japan. EM was originally used as an alternative for agricultural chemicals. Its applications has since expanded and today, EM is used in **MORE THAN 120 COUNTRIES**, in diverse fields such as sustainable agri- and aquaculture, animal husbandry, environmental restoration, industries, households and health maintenance.

## EM APPLICATIONS - MAKING MICROBES WORK FOR YOU

**SUSTAINABLE AGRICULTURE** EM promotes rapid multiplication of beneficial microorganisms which foster healthy soils and optimal growth conditions for plants, enabling high yield and good quality crops. **ANIMAL HUSBANDRY/ AQUACULTURE** EM can help reduce foul odours, suppress diseases and reduce the need of antibiotics and chemicals. Spraying EM and using EM fermented organic matter as a feed additive can improve the health of animals and thus the quality of meat, eggs, milk and fish. **WASTE MANAGEMENT** EM can be used to recycle organic wastes such as manure, kitchen garbage, leaves, grass, etc, and convert these wastes to high quality compost. Similarly, EM can be used to repel insects and suppress odors at garbage collection sites and composting facilities. **WATER TREATMENT/LANDSCAPING** EM can be used to enhance the biodiversity of the ecosystem in rivers, lakes, and other bodies of water. It can be used to accelerate the decomposition of sludge and reduce foul odor of wastewater. **HOUSEHOLD** EM is applicable to our daily life. It can be sprayed in the bathroom, kitchen and rooms to remove unpleasant odor and suppress fungal growth. EM can also be used in lawns and gardens to grow flowers, fruits and vegetables.

