

Impact of EM on Soil Microflora

This trial (Higa & Wididana, 1991) conducted by EM developer Professor Dr Terou Higa and Gene Widdiana at the University of Ryukus in Japan looked at the changes in the Soil Microflora Induced by EM. In the study reported here, EM cultures increased the number of Enterobacter spp. and starch digesting bacteria in soil. EM products markedly suppressed the number of Verticillium, Thielaviopsis, and Fusarium fungal species that are destructive soil borne plant pathogens while also significantly increasing the population of Trichoderma and Penicillium species that are known to suppress plant pathogenic fungi in soils: Soil physical properties, including cultivation depth and porosity, were generally improved by EM treatment.



Treatment	Bacteria x 10 ⁵	Fungi x 10 ³	Actinomycetes x 10 ⁴
Control	47.8	9.42	17.9
Fertilised Control	59.4	23.1	8.38
EM	147	35.5	29.6

In another trial (Lim, Pak, & Jong, 1997) conducted in Korea the effect of EM on the number of microorganisms in the soil was measured. The below table shows that the EM treatment increased the number of aerobic bacteria, anaerobic bacteria, nitrogen-fixing bacteria and actinomycetes 10.5, 17.8, 49.6, and 1.7 times over the control, respectively.

Treatment	Aerobic Bacteria x 10 ⁷	Anaerobic Bacteria x 10 ⁶	Actinomycetes x 10 ⁵	Nitrogen Fixers x 10 ⁴	Filamentous fungi x 10 ⁴
Control	1.1	1.3	1.5	1.1	5.3
EM	11.6	23.1	2.6	54.6	6.0

