

Q&A

22Q4: Is EM (Effective Microorganisms) effective in reducing water pollutants of the river?

(Ms. L.K. Thailand)

A : Effective Microorganisms (EM) was developed by Professor Teruo HIGA of Ryukyu University, Japan for improving the soil of agriculture in 1982. It is a name of microorganism material. Groups for promoting EM with Professor HIGA say that EM consist of lactobacillus, yeast fungus and photosynthetic bacteria mainly and it is used for fertilizer, purification of environmental pollution, health promotion and so on. There are, however, arguments both for and against the effect of EM in Japan. This time, Mr. AKAISHI has answered based on his experience for a question from Thailand. (Notes by Ms. YAMAMOTO, WaQuAC-Net)

I say "No", it is almost none effective. Many environmental groups tried to purify river using EM-ball ten years ago. However, I never heard EM have effect for purifying the river water. Japanese government makes a clear distinction from these groups acting for improving environment pollution.

In general, there are a lot of existing creature in river and lake. And they compete with each other. After you put on EM in this kind of environment, EM will compete with other creature as long as it does not increase significantly under the circumstances. Growth rate of non-organisms such as viruses is significantly faster. However, the doubling rate of E.coli which is growth rate is faster generally is environment which is isolate from river, for example river purification facility. 20 minutes in an optimum culturing condition. Therefore, it is unlikely that EM will be dominant species unless a lot of EM is sprayed in. In other word, I think it is difficult to purify river if you spayed a slight amount of EM in the public water area such as river which there is a lot of creatures.

Actually, local elemental school student sprayed EM in Fukuoka's urban river, but it is not effective. Since citizens demanded improving water quality of this river, public administration constructed river purification facility which I designed. I heard it is effective for water-purifier tank, because it is isolated area and induction dose of EM is more than environmental capacity.

(Answerer: Mr. AKAISHI Korehiro, 2014)