

Utilization of the terrestrial cyanobacteria

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The terrestrial, N₂ -fixing cyanobacterium, *Nostoc commune* has expected to utilize for agriculture, food and terraforming cause of its extracellular polysaccharide, desiccation tolerance and nitrogen fixation. Previously, the first author indicated that desiccation related genes were analyzed and the suggested that the genes were related to nitrogen fixation and metabolisms in *Nostoc(Anabaena)* sp. PCC 7120. In this report, we suggest possibility of agriculture, using the cyanobacterium. Further, we also found radioactive compounds accumulated *Nostoc commune* (cyanobacterium) in Fukushima, Japan after nuclear accident. Thus, it is investigated to remove radioactive compounds from soil by the cyanobacterium and showed to accumulate radioactive compounds using the cyanobacterium. We will discuss utilization of terrestrial cyanobacteria under closed environment.

Keywords: desiccation, terrestrial cyanobacteria, bioremediation, agriculture, decontamination