

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. For isolation, many of bacteria, fungi, algae and cyanobacteria were obtained from natural *Nostoc commune* crusts. It may be suggesting that *Nostoc commune* has potential of "Cradle of Life". 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, space agriculture