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Microbes in Soil: An Apprehension on Climate Change

Vivek Kumar *, Ajit Varma

Amity Institute of Microbial Technology, AMITY University, Sector-125, Noida-201303, India

Address for Correspondence: Vivek Kumar; vkumar51@amity.edu ; vivekbps@gmail.com

ABSTRACT: Universal climate change is taking place which is being observed globally by the melting of the polar ice sheets and locally by profound rain and flooding and the milder winters we are facing. For all these unwanted changes, unwanted activities of human beings along with microorganisms are answerable Microorganisms found in the soil are vital to many of the ecological processes that sustain life such as nutrient cycling, decay of plant matter, consumption and production of trace gases, and transformation of metals. Microorganisms in soil play an important role in manufacture and utilization of greenhouse gases, which mainly includes carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and nitric oxide (NO), and anthropogenic activities such as ravage discarding and agriculture activities have stimulated the generation of greenhouse gases by microbes. The feedback responses of microorganisms to climate change in terms of greenhouse gas flux may either intensify or lessen the rate of climate change. The role of symbiotic microorganisms and plant communities in terrestrial ecosystems such as nitrogen-fixing bacteria and mycorrhizal fungi in climate change is well understood; however, the response of the heterotrophic microbial communities in soils to climate change, including global warming and altered precipitation, is less understood. The complexity of microbial communities associated with plants and or living independently and the a range of habits they connect with their surroundings make it tricky to locate the diverse feedback reply that soil microbes may have on to global warming.

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