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Combating Climate Change by Organic Agriculture: Mitigation and Adaptation Options for Sustaining Food Security

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Abstract

The climate is one of the main determinants of agricultural production. At present, climate change has been appeared as a tremendous global crisis and modern agriculture is responsible for anthropogenic emissions of Greenhouse Gases (GHGs) which are important causing factors. The ill effects of global warming and climate change have been reflected adversely in agriculture causing threat to food productivity and security. Thus there is an urgent need for adoption of ecologically sound and economically viable farming practices to mitigate the adverse effects of global warming as well as climate change. Organic agriculture is one of the most prominent and widely practiced ecologically sound farming systems and it might be a suitable option as it is based on the principles of 'care, health, ecology and fairness' with the capability to reduce emission of GHGs. Moreover, organic agriculture provides several gains like contribution to the conservation of biological diversity and animal welfare, supply of local products of natural origin, reduction of fossils fuel energy and protection of the environment from pollution with chemicals, carbon sequestration and restoration of soil fertility, assurance to agricultural sustainability, and thus ensuring food security to ever growing population of the world.

Keywords: Climate change; GHGs emission; Organic agriculture; Mitigation; Adaptation; Sustainability; Food security