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Climate Change and Livestock Production: A Literature Review

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Abstract

Globally, the climate is changing, and this has implications for livestock. Climate affects livestock growth rates, milk and egg production, reproductive performance, morbidity, and mortality, along with feed supply. Simultaneously, livestock is a climate change driver, generating 14.5% of total anthropogenic Greenhouse Gas (GHG) emissions. Herein, we review the literature addressing climate change and livestock, covering impacts, emissions, adaptation possibilities, and mitigation strategies. While the existing literature principally focuses on ruminants, we extended the scope to include non-ruminants. We found that livestock are affected by climate change and do enhance climate change through emissions but that there are adaptation and mitigation actions that can limit the effects of climate change. We also suggest some research directions and especially find the need for work in developing country settings. In the context of climate change, adaptation measures are pivotal to sustaining the growing demand for livestock products, but often their relevance depends on local conditions. Furthermore, mitigation is key to limiting the future extent of climate change and there are a number of possible strategies.

Keywords: climate change, animal husbandry, greenhouse gas emissions, climate change mitigation, climate chang

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