

CLIMATE CHANGE ADAPTATION BY SMALLHOLDER DAIRY FARMERS IN THE ANURADHAPURA DISTRICT, SRI LANKA

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Smallholder dairy cattle production is an important sector for improving livelihoods and eradicating rural poverty in Sri Lanka. Climate change has threatened the sector due to its reliance on climate-dependent natural resources, specifically fodder and water. Adaptation to adverse climate change conditions is critical for the sustainability of the smallholder dairy cattle sector. Therefore, this study investigated how farmers perceive climate change, the strategies they adopt, and the factors that influence climate change adaptation by smallholder dairy cattle farmers. The study was carried out in the most vulnerable cattle production areas for climate change in the Anuradhapura district. A tree-stage proportionate random sampling technique was used to identify 250 smallholder cattle farming households to collect primary data through a field survey. The data were analysed using descriptive and regression analysis. Results revealed that cattle farmers perceived climate change as a decrease in rainfall and an increase in temperature that negatively impact livestock, natural resources, and the community. Farmers' prominent adaptation strategies were increasing the availability of drinking water, providing shade, and bathing the animals. The regression analysis revealed that the farmer's education level, farming experience, number of dairy animals, and ownership of agricultural productive assets have a positive significant influence ($p < 0.05$) on climate adaptation decisions. Labour shortages, time constraints, lack of climate change information, and financial constraints were identified as the major barriers to implement climate change adaptation strategies. Climate resilience among smallholder dairy cattle farmers can be promoted by addressing the above identified factors. Extension and veterinary officers can work together to improve the awareness among farmers on climate change and possible adaptation strategies to sustain the smallholder dairy farming sector in Sri Lanka.

Keywords: Cattle production, Climate adaptation, Climate resilience, Perceived impact