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PERCEPTIONS OF CLIMATE CHANGE VARIABILITY AND ADAPTATION STRATEGIES ON SMALLHOLDER DAIRY FARMING SYSTEMS: INSIGHTS FROM SIAYA COUNTY OF WESTERN KENYA

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Abstract

Climate change and variability is bound to impact Smallholder Dairy Farming Systems due to overreliance on rainfed fodder production; yet climate models project increased frequency of droughts with a bearing on the Length of Growing Period. Similarly higher environmental temperatures are partly attributed to biome-range shifts, implying a likelihood of emerging and re-emergence of livestock and fodder diseases and pests. Nonetheless not much is documented of perceptions and adaptation strategies employed by Smallholder Dairy Farming Systems geared towards resilience to climatic shocks. By employing a mixed methods approach that included household surveys, participatory methods and statistical data analysis using SPSS package, this study aimed to bridge some of the existing gaps in adaptation strategies on Smallholder Dairy Farming Systems in Siaya Sub-County of Western Kenya. Survey results obtained from 100 households and Focused Group Discussions revealed that the climate of the study location was perceived to have changed, with droughts singled out as the most frequent. These perceptions were consistent with long-term climate data analysis which affirmed that all seasons, i.e. MAM, JJA, and DJF with the exception of SON showed longterm drying trends. Similarly, environmental temperature of a similar region showed upward trends in both maximum and minimum temperatures that were perceived to be the cause of the proliferation of noxious weeds previously associated with hotter areas of the County. Typologies of adaptation strategies used in

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