This paper examines the impact of climate change on the decision of farmers to engage or not to engage in livestock activities and also on the choice of different livestock species in Kenya. To this end, cross-sectional household level data supplemented by long-term averages of climate data are used. The probit model is employed to derive the response of the probability of engaging in livestock activities to climate change. Probit and multivariate probit methods are employed to model the choice of different livestock species. Atmosphere-ocean global circulation models are used to project the impact of different climate scenarios on the probability of engaging in livestock activities and also of adopting different livestock species according to variations in climate. The results suggest that farmers adapt livestock management decisions to climate change. At low levels of temperature increase, the probability of engaging in livestock activities falls, but at higher levels of climate change, the probability rises. The results further show that as it gets hotter, farmers change their livestock choices from dairy cattle and sheep to beef cattle and goats.