Grapevine Farmers' Adaptation to Climate Change and its Implication to Human Health: A Case of Dodoma, Tanzania

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Abstract : Grapevine is a drought resistant crop, although in recent years it has been observed to be affect by climate change. This compelled investigation of grapevine farmers' adaptation strategies to climate change in Dodoma, Tanzania. A mixed research approach was adopted. Likewise, purposive and random sampling techniques were used to select individuals for the study. About 248 grapevine farmers and 64 key informants and members of focus group discussions were involved. Primary data were collected through surveys, discussions, interviews, and observations, while secondary data were collected through documentary reviews. Quantitative data were analysed through descriptive statistics by means of IBM (SPSS) software while the qualitative data were analysed through content analysis. The findings indicate that climate change has adversely affected grapevine production leading to the occurrence of grapevine pests and diseases, drought which increases costs for irrigation and uncertainties which affect grapevine markets. For the purpose of lessening grapevine production constraints due to climate change, farmers have been using several adaptation strategies. Some of the strategies include application of pesticides, use of scarers to threaten birds, irrigation, timed pruning, manure fertilisers and diversification to other farm or non-farm activities. The use of pesticides and industrial fertilizers were regarded as increasing human health risks in the study area. The researchers recommend that the Tanzania government should strengthen the agricultural extension services in the study area so that the farmers undertake adaptation strategies with the consideration of human health safety.