

Abstract

The adoption of appropriate technologies in small-scale farming is an important response to the effects of climate change and variability, especially in Africa. This study investigates the levels of awareness and adoption of some appropriate technologies at two pairs of sites matched for rainfall, but differing in temperature, in semi-arid and sub-humid regions of Kenya. The pairs were also subsequently matched to form cool and warm regions. The study used participatory methods consisting of 20 focusgroup discussions and data from 722 randomly sampled households from the two regions. The descriptive and inferential results show that there was a high level of awareness of appropriate technologies but low rates of adoption in all regions. Even though gender did not influence awareness of the technologies, it had a positive correlation with adoption of the technologies. There was a difference in adoption of between male-headed households and female-headed households at a 1% level of significance. Technology knowledge and use were higher in the semi-arid and warm regions than in the subhumid and cool regions, with farmer-to-farmer learning being the most prominent source of information. There was a difference in the use of technologies which have a positive impact in regions with high temperatures at a 1% level of significance. A higher percentage of farmers used water harvesting, reduced tillage, crop rotation, green manure and used mulches in the warm regions compared to cool regions. The trend in awareness and adoption assumed a gender and an ecological dimension in favour of males, in both semi-arid regions and warm regions