While risk sharing institutions like national insurance and credit schemes that help reduce the burden of risk to farmers are weak in Kenya, private sector insurance products have failed to develop. Farmers have opted for self-insurance strategies that include diversification and social mechanisms. Non-farm investments are one of the diversification strategies whose effectiveness in risk management in Kenya has not been established. This study sought to investigate farmers’ risk management strategies and the effectiveness of non-farm investments. Data was collected from 100 randomly selected farm households using a structured questionnaire that was administered by trained enumerators. In order to identify the most prevalent risk management strategies, descriptive statistics were computed. Effectiveness of non-farm investments in risk management was assessed by simulating the effect of replacing the weight of farm income with that of non-farm income on the coefficient of variation of total household income. Non-farm self-insurance strategies included engagement in wage or salary earning activity, non-farm investment and membership in social groups. The simulation revealed that an increase in non-farm investment income lowered the coefficient of variation, indicating that a marginal increase in non-farm investment income stabilized total household income, while a decrease in non-farm investment income weight increased variability of total income. Government policies and institutional mechanisms that reduce risk (such as crop insurance and irrigation technologies) and those that facilitate farmers’ access to productive assets like non-farm investments are required in order enable farmers to manage risks in farming.