This paper identifies the innovative methods used by urban farmers to reduce the health and environmental risks linked to wastewater-irrigated agriculture in Nairobi, Kenya. A study involving 317 urban and peri-urban farmers was conducted and innovative methods identified for risk-reduction in wastewater irrigation. According to the results, the farmers’ choice of adaptation measures in wastewater irrigation was: No intervention (49.8%), crops restriction (21.1%), protective clothing (12.6%), safer application (8.8%), and irrigation cessation (7.6%). The estimated model had a robust explanatory ability since the likelihood ratio statistics were statistically significant (=222.13; p=0.000). The marginal analysis results show that the following factors significantly (p=0.005) influence the farmers’ choice of low-risk measures in wastewater irrigation: Household size, farming experience, membership to farmers group, access to credit, access to certified seed, access to media, crop income, awareness to World Health Organization irrigation guidelines, and awareness to wastewater hazards. Therefore, it was concluded that education support and creation of awareness about health risks in wastewater irrigation are important for enhanced adoption of risk-reduction technologies among the farmers. There is a need to design policies and programs that support farmers in safe wastewater irrigation, while raising their awareness on the health hazards attributed to untreated wastewater reuse.