

ABSTRACT

Sustainable intensification promotes environmentally sound and productive agriculture. However, use of sustainable intensification practices (SIPs) is low in many sub-Saharan African countries. This study examined the adoption of SIPs in Kenyan rural and peri-urban vegetable production to understand the scale of and underlying factors in the use of SIPs. A multistage sampling technique was employed to randomly select 685 rural and peri-urban vegetable farm households. Household data was then collected and analysed for four practices namely improved irrigation, integrated soil fertility, organic manure and crop diversification using a pre-tested structured questionnaire. A multivariate probit model was run to model simultaneous interdependent adoption decisions. Adoption of organic manure and African indigenous vegetables (AIV) diversification was high in both rural and peri-urban areas. However, adoption of improved irrigation systems and integrated soil fertility management was low, and even significantly lower in rural areas than in peri-urban areas ($p < 0.041$). Similarly, adoption intensity of SIPs was lower in rural areas than in peri-urban areas. Furthermore, the findings also show complementarities and substitutabilities between SIPs. Market integration, the farm location and household income were the major factors heavily influencing the adoption of most SIPs. Policies and programmes that seek to build household financial capital base and integrate farm households into effective and efficient vegetable markets need to be formulated and implemented in order to enhance adoption of SIPs in AIV production.

Keywords

Adoption, farm households, peri-urban, rural, sustainable intensification, vegetables, Kenya