

## **Abstract:**

This study examines gender dynamics influencing the adoption of Climate-Smart Agriculture (CSA) practices and technologies in the Irish potato value chain of Kuresoi North Sub-County, Nakuru County, Kenya. It challenges the prevailing “time poverty” narrative that attributes women’s lower adoption rates to workload burdens and instead investigates the role of women’s agency—defined by decision-making authority and control over productive resources. Using a convergent mixed-methods design, data were collected from 197 smallholder potato farmers through structured questionnaires and five key informant interviews. Quantitative analysis using chi-square and t-tests revealed no significant relationship between workload burden and CSA adoption ( $\chi^2 = 8.163$ ,  $p = 0.226$ ), contradicting conventional assumptions. In contrast, household decision-making patterns demonstrated that men made most agricultural and financial decisions (59.9–65.5%), while women primarily adopted labour-intensive practices that required minimal external inputs. Qualitative insights confirmed that limited access to land, credit, and household authority constrained women’s capacity to adopt capital-intensive CSA technologies such as improved seed varieties. The findings highlight that structural inequalities, rather than labour demands, shape gendered adoption patterns. The study recommends promoting joint land titling, whole-household extension approaches, and strengthening women’s collective financial platforms such as Village Savings and Loan Associations (VSLAs). Addressing these agency related constraints is essential to enhance equitable CSA adoption and ensure gender-responsive agricultural transformation