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"Can agroecological farming feed the world?
Farmers' and academia's views"

# Farmers' motivation to adopt sustainable agricultural innovations in Rwanda

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**Abstract**

Rwanda's smallholder agricultural sector faces numerous ecological obstacles which include soil degradation and poor soil fertility. The long-term climatic risks could affect the agricultural yields and food security of the rain-fed agricultural dependant households. One alternative to address these challenges is to promote more sustainable production innovations amongst resource poor farmers. Therefore, it is imperative to understand the behaviour of farmers towards using sustainable agricultural practices as an adaptive strategy. Our study aimed to determine farmers' motivation to adopt sustainable agricultural innovations and identify the factors influencing their decisions. One-on-one interviews were conducted with farmers from Abakorana Murava Cooperative in Gisagara district, in the Southern province of Rwanda, using a semi-structured questionnaire. The findings indicate that farmers were strongly motivated to implement sustainable innovations to increase soil fertility (92 %), climatic adaption (86 %), increase yields, and community social responsibility. Some factors that significantly influenced the adoption of sustainable innovation include training, access to credit, cooperatives, and land ownership. Supporting research and development in sustainable technologies and providing incentives from government financial institutions to encourage adoption could ensure that conservation efforts are efficient and sustainable. Sustainable agricultural practices such as agroforestry could be adopted to reduce the effects of soil erosion brought about by the heavy rainfall experienced in the Southern province of Rwanda. Further, alley cropping and multi-purpose tree species could be adopted as a form of weed control. The government and stakeholders could support capacity building and training amongst farmers, thus, encouraging the uptake of sustainable innovations. This would, in turn, result in increased food production and, subsequently, enhanced household food security.

**Keywords:** Adaptation, ecological, innovations, motivation, Rwanda, smallholder

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