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Motivational drivers for choices of agricultural production systems: A comparative study of farmers in Tanzania and Niger

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Abstract

This study examines the motivations of farmers in Tanzania and Niger and their influence on the choice of agricultural production systems. By exploring factors such as improving soil quality, achieving better yields, sustainable production, utilising available resources, enhancing social reputation, gaining family appreciation, preparing for farm succession, reducing reliance on external inputs, minimising risks, and obtaining healthy food, we aimed to understand how these motivations impact farmers' decisions to adopt organic, conventional, or integrated farming practices. Data were collected from 392 Tanzanian and 684 Nigerien farmers using Kobo Toolbox and analysed using R software, with Principal Component Analysis (PCA) conducted separately for each country to assess variations in farmers' motivations. The PCA results revealed significant differences between the two countries. For Tanzanian farmers, the PCA explained 88.1% of the variation in motivations, indicating a strong alignment between their motivations and the choice of organic farming. This suggests that organic practices in Tanzania are closely linked with desired agricultural and economic outcomes, driven by the motivations studied. In contrast, in Niger, the PCA accounted for 63.5% of the variance in motivations, showing a weaker correlation between motivations and the adoption of organic farming, pointing to potentially different influencing factors or challenges. The study highlights the importance of understanding region-specific farmer motivations to tailor agricultural policies and interventions effectively. Such insights are vital for promoting sustainable practices that align with farmers' goals and regional needs, thereby enhancing productivity, environmental sustainability, and rural livelihoods. This approach not only supports the farming community but also contributes to global efforts to tackle challenges like food security and climate change.

Keywords: Farmers, motivations, perceptions, principal component analysis, sustainable agriculture