



Solar Irrigation in East African Highlands: An Economic Viability Study for Coffee Production in Togo 2004

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Abstract

Solar irrigation systems have shown potential in improving agricultural productivity in various regions, particularly in arid and semi-arid areas. However, their application in coffee production in East African highlands is less explored, especially for smallholder farmers. An exploratory qualitative study was conducted through semi-structured interviews with local coffee growers, focus groups, and secondary data analysis. The sample included 30 respondents from four regions of Togo. The findings revealed a significant variation in the economic outcomes of solar irrigation adoption among different farming communities (40% reported higher yields and profits). Solar-powered irrigation systems can be viable for coffee production under certain conditions, particularly where water scarcity is prevalent. However, tailored support mechanisms are necessary to ensure widespread adoption. Policy makers should invest in research and development of solar irrigation technologies specifically designed for East African Highlands. Additionally, subsidies and training programmes are recommended to facilitate uptake by smallholder farmers.

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