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## Possibilities and Acceptance of Alternative Energies from Farm Solid Waste Material (Kocho): Case Study from Kembata Tenbaro Zone, Ethiopia

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### Abstract

Scarcity of renewable energy and environmental changes are basic intertwined problems of global concern. Ethiopia is one of the developing countries that use high quality and quantity of energy, mainly from different forms of biomass and primarily for household consumption. In the rural part of the country, the energy use patterns are widely misunderstood because of factors such as population growth and changing consumption habits. The aims of this study were to (i) identify and quantitatively analyse farm solid waste material for its heat energy release; (ii) analyse the production of heat energy from briquettes made of Kocho fibers – Kocho is a waste product of false banana which is a primary food material for the local population; (iii) finally, propose additional sources of energy for household consumption and design a capacity building tool for local users.

The study used a stratified sample of 350 rural households in seventeen kebeles of Angacha Woreda; the Kocho residue material was collected from participating households after food consumption.

The practices of using alternative renewable energy from farm waste material decreases the negative impact on the environment and provides affordable energy as an essential condition for improving the lives in rural areas.

**Keywords:** Farm solid waste management, Kocho fiber briquettes, technology adoption