Tropentag, September 9-11, 2020, virtual conference

"Food and nutrition security and its resilience to global crises"

Sustainably Feeding Africa: Wood-Burning Technologies in the Food-Energy Nexus (FEN)

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Abstract

Can woodlands co-exist sustainably with the ever food- and energy-hungry human species? Are improved woodstoves a sustainable energy option for the kitchen and fireplace of rural and suburban Africa? There are many questions that surround ideas around woodfuel as an energy source. Many studies have been done to indicate how unsustainable reliance on woodfuel is to the forests, savannahs and woodlands. It should be borne in mind that $> 90\,\%$ of rural/ suburban households in sub-Saharan Africa depend on biomass-based energy sources. Biomass-based technologies that focus on sustainability concepts may point to a better and healthier future for many families especially in sub-Saharan Africa. The objective of this study (this presentation) is to stimulate some discussion on the sustainable pathways in the bio-energy economy and how this relates to food security and environmental conservation. In this study a total of 26 stove users, non-users and promoters in Tanzania were interviewed using semi-structured, unstructured and focused interview methods. Results indicated that, at the farmer's level, proper application of improved woodstoves faces the following challenges: lack of techniques to evaluate stove's efficiency; farmers are not involved woodburning projects' evaluation; lack of technical capacity to make or repair woodstoves; and inherent woodstoves problem e.g. faults and non-versatility. In practice, women who are the primary users of stoves for cooking and heating are either passively or partially involved in decision-making related to the production and maintenance of woodstoves. At the policy-making level; the government is yet to make stove programs a priority and has settled for the NGO-led dissemination efforts. Results from this study will be a useful contribution for researchers, policy makers, NGOs and groups involved in promoting the sustainable adoption and use of improved woodstoves.

Keywords: Rural food-energy systems, sustainable futures, woodfuel economy

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