

WASTE-TO-ENERGY PRACTICES ON SMALL SCALE FARMS; UNIVERSITY OF LIMPOPO (UL) RURAL DEVELOPMENT AND INNOVATION HUB (RDIH) FARMERS' STUDY GROUP

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KEY FINDINGS

An action research study titled: Waste-to-energy practices on small scale farms; University of Limpopo (UL) Rural Development and Innovation Hub (RDIH) farmers' study group was conducted in response to a small holder farmer support groups' learning outcomes as identified by the small holder farmers themselves. An iterative approach to data analysis informed the action-reflection-planning process of the study. The study established that the principles of a Circular economy are evident on all twelve (12) participating farms, with waste generated on farms being reused and recycled, limiting the potential to generate energy from existing waste on small holder farms. The study informed a complementary and extended project namely the Rural Innovation and Farmer Support, aimed to explore Alternative Farming Methods and Resources, Renewable Energy, Solar Energy and Climate Change Innovation linked to small holder farming.

INTRODUCTION

Small scale farmers are identified as amongst the most marginalised and food-insecure in rural society in Sub Sahara Africa (Borrelli, Benegiamo, Mura & Razzano 2020:16). Confirmed by the findings within the scope of this study we adopted Kirsten and van Zyl's (1998:555) description of small-scale farmer as "one whose scale of operation is too small to attract the provision of the services he/she needs to be able to significantly increase his/her productivity." Small scale farming does not constitute non-productive or non-commercial farming but rather refers to the lower level of net farm income (Kirsten &, Van Zyl 1998: 551; 554). Participating farmers also preferred to refer to themselves as farmers farming on a smaller piece of land or small holder farmers and will be referred to as such.

Cognisant of the challenges faced by small holder farmers, the RDIH of the University of Limpopo initiated, upon requests of these farmers, study groups aimed at addressing small holder farmers' priorities. The farmers' take strong ownership of the study groups, setting objectives and identifying ongoing learning priorities. The COVID-19 pandemic did not only expose national and global inequalities but also the need to move beyond the rhetoric of tailor-made blueprint research plans not only benefitting research

objectives but more so participant objectives. Relevant to the study we aimed to find common sense practical solutions based on the co-management of the waste ecology that impacts on the daily living of small holder farmers.

One of the various priority learning areas as identified by the farmers was to: Explore more energy efficient ways to farm. Bringing the problem of waste and the challenges faced by small holder farmers together the study unpacked the current waste management practices on small holder farms and explore context relevant waste-to-energy practices from the perspective of the participating farmers.

This study provided valuable findings relating to waste-to-energy practices on demarcated small holder farms with valuable lessons learned which informed future research but so too small holder farmer support priorities.

METHODOLOGY

The theoretical framework fit for the chosen action-research design was informed by; social constructivism, the Person Centred Approach and Agroecological farming. These frameworks directed the actual processes in finding answers for the research questions not on behalf but in participation with participants. The

study was done in real life conditions where the participants farm aimed at exploring and discovering waste-to-energy practices amongst small holder farmers of the RDIH's Farmer's Study Group from the farmers own and unique perceptions and experiences. Action research as design best fit the purpose of the study with its continuous action-reflection-planning processes.

The population relevant to this study consisted of farmers involved in the RDIH at UL's study group for local small holder farmers in Limpopo. Purposive

sampling, identified twelve (12) participants according to set criteria for inclusion. An array of data collection methods were used and tailored according to task and research specific objectives. Data collection methods included Questionnaires, Semi-structured interviews aided by an interview guide, Observations guided by an observation guideline and a Focus group discussion. Data analysis was an "iterative" process with a repetitive interplay between data collection and thematic analysis. The process of meaning making was done in confirmation and in collaboration with participants.

RESULTS

