Compost, the final stage of Integrated Manure Management

Implementation Details

Area: Malawi
Period: April 2015 to September 2015
Goal: Capacity building

Field training on building a compost heap.

Situation Analysis

The Crop-Livestock Integration Project (CLIP) aims to improve the level of integration between crops and livestock at the smallholder farmer level. Part of the project deals with promoting biogas. However, there is no focus on digester maintenance and the use of the bio-slurry. Also, many farmers do very little to manage manure. Often manure is stored in uncovered heaps, or the kraal is only cleaned annually after which the manure applied directly to the fields. Both methods result in high methane emissions as well as high leaching losses of nutrients.

The biggest barrier to the sustainable use of bio-digesters and manure/bio-slurry is a lack of awareness, and knowledge and skills. Farmers' main information sources are local government extension workers and within the CLIP program also "lead" farmers. Beside this there are often not enough skilled masons to construct a bio-digester plant.

Opportunity

By improving the knowledge and skills of extension workers and lead farmers on the sustainable use of bio-digesters, and the management of manure/bio-slurry to reduce SLCP emissions and enhance the value of the manure/bio-slurry as a fertilizer, the LMMC can leverage the CLIP programme.

Objectives

Improve knowledge level of extension workers, lead farmers and those who design and build the biogas plants to be able to support farmers in manure management. Subsequently this would lead to the sustainable use and management of bio-digesters and improved crop productivity by applying treated bio-slurry or manure as organic fertilizer.

Implemented Activities

Two trainings have been conducted.

1. On two locations a total of 53 participants, mainly government and some non-government extension workers, received a two-days training on integrated manure management. The first day consisted of indoors lectures followed by field work on manure management. Small scale farms dominate the Malawian livestock sector, therefore on the second day the trainees made demonstrations on proper composting of manure and bio-slurry to small scale farmers. At the end of the training, the participants made action plans to be used for the subsequent follow up activities.
2. 19 Malawian masons received extensive training in the actual constructing of a fixed-dome anaerobic digester. The trainees learned how to determine the plant size, design the lay-out, dig the pits, construct the digester including the inlet and outlet chambers, and lay the pipelines. The course ended with digester maintenance and trouble shouting. In addition to the digester construction, the trainees also learned about the importance of composting the bio-slurry for crop fertilization, an essential and final stage of integrated manure management.

Upcoming Activities

Trained extension workers will meet in August to discuss their achievements in relation to their implementation plans and exchange ideas on potentials for improvement.

Impact assessment	Indicator	Value
Geographical Impact (effect of scale)	Affected farm enterprises	Regional
		▶ National
		Sub-national
Socioeconomic Impact (effectiveness of activities)	Improved food security (by more income or production)	High
		▶ Medium
		Small
Impact on Climate Change (effectiveness of activities)	Reduced SLCP (methane) emission	▶ High
		Medium
		Small
Environmental Impact (effectiveness of activities)	Reduced environmental pollution	▶ High
		Medium
		Small
Stakeholder awareness (effect of activities)	No. of addressed stakeholder entities	> 5
		▶ 3-4
		1-2
Capacity building (effect of activities)	No. of people addressed in the enabling environment	> 150
		▶ 50-150
		< 50
Policy development (effect of activities)	No. of new or changed laws, rules etc.	> 2
		1-2
		▶ 0
Levering Finance (effect of activities)	Size of leveraged external investments	▶ Large
		Medium
		Not applicable

Implementers: CLIP program staff
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