

Ibrahim Wanyama¹, Mirja Michalscheck², Nelson Paul Kajoba³, Seth Owala⁴, Lynette Gakii⁵, Daphne Muchai⁵, Martin Barasa⁶, Lutz Merbold², Sonja Leitner^{7,1}

¹ILRI, Uganda; ²Agroscope, Switzerland; ³Makerere University, Uganda; ⁴Maseno University, Kenya; ⁵WoFaAK, Kenya; ⁶VSF Germany, Kenya; ⁷University of Kassel, Germany

Key messages

- Manure is already widely used: 85% of surveyed Kenyan cattle households and 81% of Ugandan pig households apply manure for fertilization.
- Most farmers still use sub-optimal storage and application practices, with limited protective gear, disinfectants and pathogen awareness (Table 1).
- Information is the main barrier to improvement , while farmers are motivated by safer handling and better fertilizer quality .

Table 1: Some of the key Current manure management status for pig and cattle farmers in Uganda and Kenya, respectively

Variable	Status	Uganda Kenya	
		% of households	
Manure storage facility	No cover	96	88
Manure storage facility	No floor	96	79
Use Gloves	Not Used	94	94
Disinfection of animal shelter	Not disinfected	97	99
Awareness of potential pathogens in manure	Not aware	88	81

Our approach

- Household surveys assessed manure practices, constraints and drivers among cattle farmers in Kenya and pig farmers in Uganda.
- Inclusive Digital advisory tools were tailored to local access: an AI-powered WhatsApp chatbot in Kenya and an Interactive Voice Response hotline in Uganda.
- We trained 60 trainers in the study areas of each country. The trainers will establish demonstrations of improved manure management practices on their farms and cascade the knowledge to other farmers, particularly those directly involved in handling and managing manure.

Context

- Effective manure management supports soil health, farm hygiene and crop–livestock integration in smallholder systems.
- In Kenya and Uganda, evidence on current practices, constraints and practical pathways for improvement remains limited.
- Poor storage, handling and field application can increase disease transmission, environmental contamination, nutrient losses and greenhouse gas emissions.

Reaching out to farmers

Telephone based channels

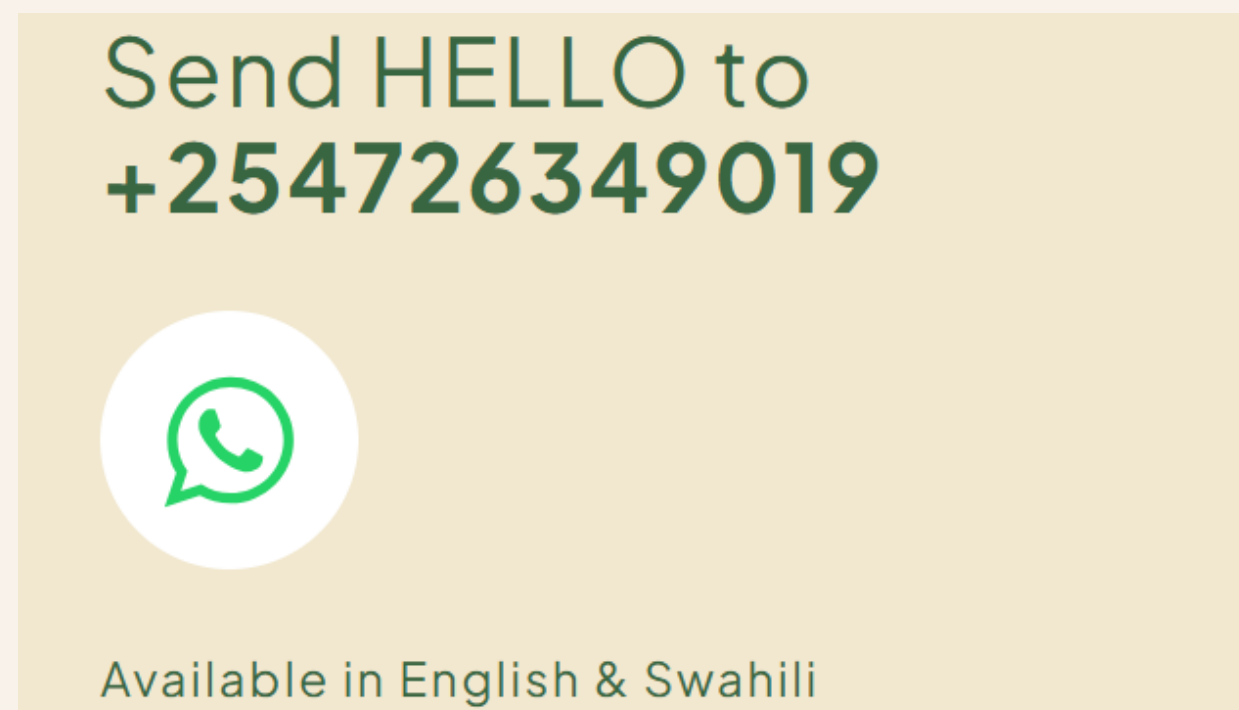
Uganda:

Pre-recorded voice messages



Kenya

AI driven WhatsApp chatbot



Outcomes

- Clear evidence of a knowledge gap and farmer demand for safer, nutrient-conserving manure management.
- A multi-modal outreach strategy designed to reach farmers with different levels of phone access, literacy, gender and advisory needs.
- A pathway to scale improved manure handling, storage and application practices among smallholder farmers in East Africa.

Next steps

- Deploy and test the WhatsApp chatbot and IVR hotline and continuously review advisory messages with experts;
- Assess farmer acceptability, uptake and opportunities for wider scaling
- Assess effectiveness of the practices on nutrient and pathogen loads

Our partners



The International Livestock Research Institute thanks all donors & organizations which globally support its work through their contributions to the CGIAR Trust Fund. cgiar.org/funders

This document is licensed for use under the Creative Commons Attribution 4.0 International Licence. SEPTEMBER 2026

