



Promoting sustainable agricultural mechanization along food value chains in East Africa

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Virtual Webinar No.2 English: Operationalization of the Framework for Sustainable Agricultural Mechanisation in Africa (F-SAMA)

“Transforming Lives Through

Kilimo Trust in a Nut-Shell



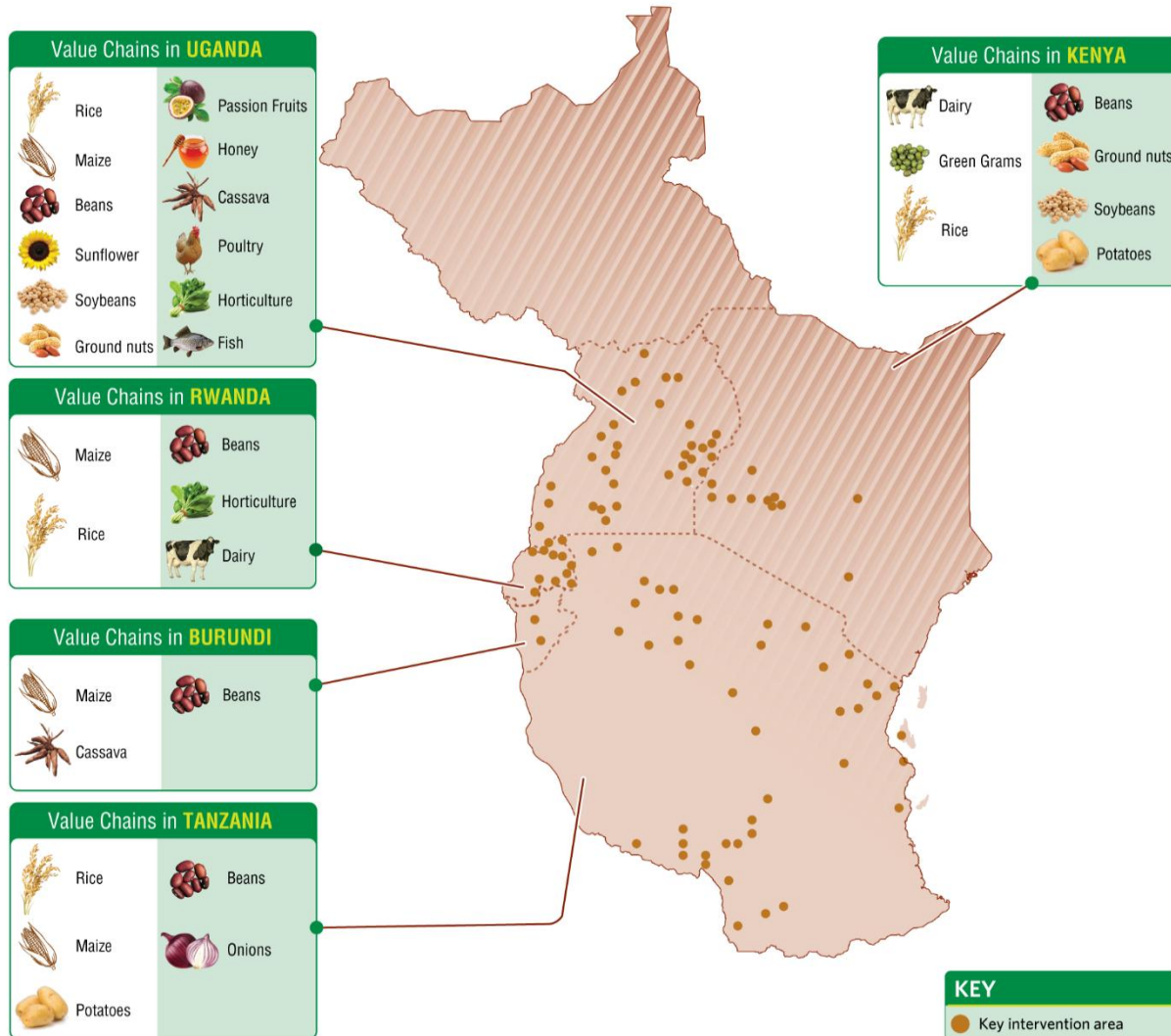
- ❑ Kilimo Trust is a go-to implementing partner for market-led Agricultural value chain development projects in East Africa.
- ❑ Established **in 2005** as a grant maker. **In 2010** started direct implementation.
- ❑ **HQ** is in Uganda with subsidiaries in Tanzania, Kenya and Rwanda.
- ❑ **We exist** to make agri-business a transformative tool for wealth creation, food and nutrition security for smallholder farmers

and other value chain actors.

- ❑ Our interventions are rooted in **brokering** private and public sector partnerships to **promote structured trade in national and regional markets**.



Value Chains Supported by Kilimo Trust



Business Models Used



Model	Characteristics
Public Sector	<ul style="list-style-type: none">• Equipment management is a challenge• Group ownership and decision making• Utilisation capacity is very low
PPP – Cooperative	
Private – Large**	<ul style="list-style-type: none">• Sustainable – target MSF and LSFs, SHF often left out
Private - Individual operators	<ul style="list-style-type: none">• Efficient, few, limited services offered other than mechanisation
Private – Village agripreneurs /agents** (Mostly Youth)	<ul style="list-style-type: none">• Small equipment, SHF friendly, affordable, huge outreach, provide multiple services (extension, bulking, sale of inputs)

Some Public Investments



Key: Business Opportunity + Multiple Service Provision



VILLAGE AGENTS AND VILLAGE SERVICE AGENTS MENU

Pre-Production

- Land opening mechanization services
 - Digital profiling agent
 - Soil testing agent
 - Crop Insurance Agent
 - Crop inspection agent

Production

- Planting services
- Weeding services
- Spraying services
 - Sale of quality agro-inputs
 - Extension services

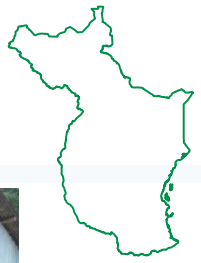
Harvesting & Postharvest

- Harvesting services
- Threshing & Shelling services
- Drying & Grain cleaning services

Marketing

- Bulking/ aggregation services
- Rural banking and digital finance
- Sale of finished agricultural and non-agricultural products

Production Technologies



Tractors



Planters



Rice Weeders



Electric Spray

Pumps

Harvesting & Postharvest Handling Technologies



Rice Cutter



Mobile Bean Thresher



Rice Threshers



Motorized Grain Cleaners

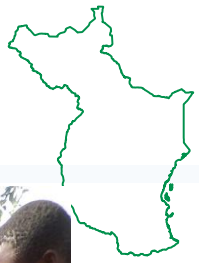


Mobile Maize Shellers



Mechanical Dryers

Harvesting & Postharvest Handling Technologies



Multi Crop Threshers



**Combined Mobile Bean Thresher
with a mobile irrigation pump**

Harvesting & Postharvest Handling Technologies



Mechanization Service Provision is Profitable



Type of Equipment	Units acquired by private sector partners	Number of direct jobs created	Average Income Earned (US\$) per service offered
Electric Spray Pumps	527	527	0.28 per knapsack
Multi crop threshers	2	8	0.9 per 100kg bag
Mobile Maize Shellers	12	48	0.83 per 100kg bag
Mobile Bean Threshers	3	12	0.97 per 100kg bag
Motorized Grain Cleaners	4	12	0.56 per 100kg bag
Grain Mechanical Driers	1	3	1.25 per 100kg bag
Rice Threshers	32	128	0.83 per 100kg bag

Role of KT

- Build capacity of equipment operators and village agents in **business & entrepreneurial skills**.
- In collaboration with equipment suppliers/ local fabricators, **build capacity of equipment operators on repair & maintenance**.
- **Market development for local fabricators & providers of technological services**
- **50% cost-sharing** with partners on the promoted technologies

Case 1: Integrating mechanization in rice farming in Tanzania through private sector partners under CARI Project



Kilimo Trust through CARI project is promoting mechanization in rice farming to increase productivity and quality of rice. A total of 7,406 smallholder farmers linked to Mamboleo Farm Company in Rufiji district benefited in 2018/2019 season.

Mechanization service provided include:

- Farm levelling using laser levers
- Weeding using push weeders
- Threshing using motorized mobile threshers, motorized paddy cutters, combine harvester
- Use of water pumps to improve water management practices



Case 2: A successful Village Agripreneur - Nsemex



- Directly employs 19 full time youth providing mechanization services e.g., spraying & mobile maize shelling services.
- Earns at least US\$ 1,100 from maize shelling services per season.
- Operates 3 input outlets with a total investment of US\$ 8,200.
- Provides extensions services to farmers.
- Procured land & established a moderate aggregation facility – US\$ 10,959
- Provides produce aggregation services - maize and coffee.
- Offers business services to at least 1,253 farmers per season.
- Lives in his own house.
- Funding his Education – BSC Agriculture

Case 3: Training of Fabricators in Rwanda



What have we learned?



- 1. Financing mechanism for technology acquisition – balance Large, Small, Individuals (sole proprietors)**
- 2. Building capacity of local equipment fabricators – reskilling, accessing appropriate fabrication tools and market linkages**
- 3. Using mechanization as a tool to attract youth in food VCs is promising - Locally fabricated low-cost equipment are a lucrative venture especially for the youth as they guarantee quick returns to investment**
- 4. Partnerships are key:** Training of equipment operators on business skills, repair and maintenance; harmonizing of approaches for mechanization
- 5. Sensitizing government officials on viability of mechanization in commercialization of VC is Key**



Thank You, **Asante Sana**



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