

Machinery Rings as a Self-Help Concept

Implemented by the *Fund for the Promotion of Innovation in Agriculture (i4Ag)*
As part of the special initiative *Transformation of Agricultural and Food Systems*

The Challenge

Smallholders have only limited access to suitable mechanisation solutions

Most family farm operations in Western Kenya consist of just one to three hectares. For economic reasons, such small areas exclude self-mechanisation, leaving farming by hand or the hiring of machine operators the only options. These mechanisation service providers often use outdated technologies that result in low yields and subsequently, limited incomes. Soils are also subject to continuous degradation, something which is exacerbated by inappropriate farming techniques as well as climate change.

Meeting farmers' demands and achieving economically viable utilisation rates remains a challenge. While the private sector plays an important role in mechanisation, a lack of regulation in mechanisation services and low capacity among tractor drivers can lead to quality outcomes that are deficient. As well, women are at a disadvantage when it comes to accessing agricultural machinery even though they account for up to 75 per cent of the agricultural labour force in Kenya.

Name of the Project	Machinery rings as self-help organisations for smallholder family farmers in Anglophone Africa
Name of the Global Fund	Fund for the Promotion of Innovation in Agriculture (i4Ag)
Commissioned by	Federal Ministry for Economic Cooperation and Development (BMZ)
Project Region	Kenya
Implementing Partners	Sequa GmbH Bundesverband der Maschinenringe e.V. (BMR)
Duration	02/2021 — 04/2024



L.: Introduction of the Machinery Ring Model in Western Kenya. R.: Project Region

The Innovation

A self-help business model to evolve the mechanisation sector

The introduction of a member-based self-help network that supported inter-farm mechanisation created a user-centred organisational innovation over Kenya's existing contract models and government-provided services. As members of the so-called Machinery Ring (MR), farmers, service providers and other actors in the agricultural sector pursue the goal of increasing the use of agricultural machinery, expanding its capacity while promoting innovations and increasing the added value of agricultural production. As a core business, the MR brings farmers and service providers together, bundles demand for contractors, creates market transparency to counteract price fluctuations for services and supports the settlement of disputes between contractors and clients. The core business will run via a digital platform, which will offer demand-oriented services for farmers and enable the exchange of knowledge about climate resilient agriculture.

A key focus of the project is the introduction of innovative shallow to zero tillage implements to rehabilitate degraded soils and to increase yields. Farmers and mechanisation service providers will be able to rent these implements.

The Main Objective

Smallholder family farms and SMEs use innovative mechanisation solutions to increase sustainability in their business



2400 machinery ring members have improved their income opportunities

1 gender strategy has been confirmed and implemented participatively by the members

On 800 hectares climate-resilient farming techniques have been introduced

The project contributes to the achievement of these Sustainable Development Goals (SDGs):



Methodological Approach and Innovation Partnership

The project builds on a cooperation with *sequa gGmbH* and *Bundesverband der Maschinenringe e.V.* (German Federal Association of Machinery Rings) providing expertise and human resources to introduce the machinery ring model in Western Kenya.

The strategy of capacity development aims to impart technical and entrepreneurial knowledge to smallholder farmers and entrepreneurs on the topics of agroecology (especially climate-resilient cultivation techniques), management, marketing and investment in machinery. The members of the MR will develop their own gender strategy which will be reflected in all decision-making processes and services offered through the MRs to ensure equal access for women and men to the services and related income opportunities.

Important Activities

- Capacity-building measures for the formation of machinery rings and related bylaws
- Development of the digital machinery ring platform
- Introduction of innovative mechanisation solutions
- Capacity development on management, cultivation techniques, marketing, machinery profitability etc.
- Knowledge exchange through field demonstrations

Sustainability and Scaling Strategy

The MRs in Kenya will be enabled in building a business model that can be independently financed over the medium- to long-term through income from membership and service fees and other collaborations with the business community. Knowledge about agroecology, management, marketing and climate-resilient cultivation practices will be anchored in the MR service provision to secure an intergenerational agricultural income. Increasing income opportunities for MR members is an important component of more sustainable farming and leads to a sustainable growth in demand for mechanisation services in the region.

The empowerment of women in smallholder family farms realises additional potential for the farms' sustainable economic development. Social acceptance for this innovative organisational approach in Western Kenya is ensured by establishing appropriate exchange formats with relevant local associations and national governments.

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