



## Machinery rings as self-help organizations for smallholder family farms in Kenya: a project of the Fund for Promotion of Innovation in Agriculture (i4Ag)

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**General project information:** The project “Machinery rings as self-help organizations for smallholder family farms in Kenya<sup>1</sup>”, as one of 29 individual measures of i4Ag, was planned to specifically target 2.400 smallholder family farms and entrepreneurs in Western Kenya. With the use of innovative mechanization solutions made accessible for members of the machinery rings, the project aims to increase sustainability in farm management while improving smallholders’ income opportunities. The GG1 project is implemented from 1 February 2021 to 30 April 2024 with a total volume of 2.826.000 EUR.

**Machinery Rings (MR)** are farmer-based self-help groups, first established in Germany 60 years ago. Core business is the organization of inter-farm use of machinery in agriculture, especially in smaller farms. Smallholders can use modern agricultural technology without having to invest in expensive machinery themselves. Nowadays, MR portfolio includes much more: Organization of logistics, development of value chains, renewable energies, consulting services on various agricultural topics, insurance services, procurement of agricultural inputs, services for municipalities and trade.

### Promoting Gender Equality

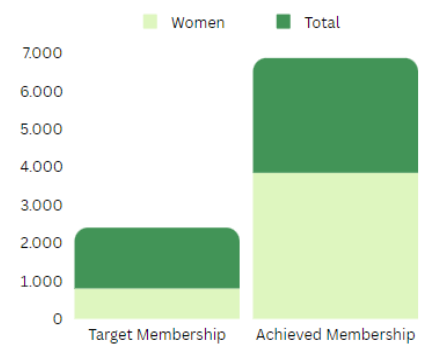
The operation of heavy machinery continues to be perceived as a “man’s job” in the Global North and South alike. Indeed, criticism has been directed towards previous agricultural mechanization projects for their gender-blindness, which inadvertently added to women’s workloads while benefitting men. In Kenya, where more than 70% of the population is employed in agriculture, mechanization solutions are scarce. Although the country exports high-value products such as cut flowers, staple food productivity (e.g., wheat and maize) is low, leading to heavy import reliance. Outmoded production techniques, limited technology access and environmental degradation contribute to low yields and incomes. Existing mechanization service providers lack resources and sustainable concepts and, although women account

<sup>1</sup> Link to [project factsheet](#)

for up to 75% of the agricultural labor force, they are still side-lined in mechanization solutions, accounting for only 16% of service providers in western Kenya.

To ensure real benefits for—and by—women farmers, this project follows an explicitly gender-responsive approach that acknowledges gendered needs and demands and actively takes measures towards women’s empowerment. Its value lies in combining the dissemination of technological innovation, such as improved machinery and soil management practices, with organizational innovation (the machinery rings as a form of self-help organization) that offers opportunities for women and the reinvention of gendered norms and stereotypes.

Although the project was designed as GG1-project with conservative gender quotas, it has yielded positive impact exceeding expectations. Over the last two years, the number of farmers benefiting in terms of income generation is nearly three times higher than targeted (6,865 instead of 2,400), with more than half (54%) being women (as compared to 30% targeted). Improved income resulted from yield gains due the introduction of climate-resilient soil management practices, improved mechanization services and cooperative marketing. In addition, the project has fostered women’s empowerment through institutional representation. More than half of all paying members of the recently established MRs are women, including among the 389 board members, of which 56% are women. Almost 80% of secretary positions are held by women. Moreover, two MRs in Bungoma county are headed by women.



The partnership yields short-term gains in income and yield through technological and organization innovations. It also creates long-term impacts for women’s empowerment in household decision-making and the agriculture sector. Smallholder farmers Jane Ng’endo and her husband (pictured left) provide an example of this impact as, after MR trainings, they invested in a small tractor which increased their crop yield, generated income and created employment for their son. The project also empowers



women in household planning and fosters a societal perception of women in leadership. Naomi, a farmer in Nyandarua (pictured page 3\*), financed and operates a maize sheller through the MR, showcasing how targeted support empowers women as sector leaders and entrepreneurs, reshaping societal roles and perceptions.

The success factor was the participative development and implementation of a gender strategy through a gender action plan. A gender needs assessment preceded the strategy, involving local women to address specific needs. After partner alignment and confirmation by all members, the gender strategy was integrated into MRs’ organizational structure. The machinery rings now offer

services explicitly tailored to women, such as business coaching for entrepreneurs. These services strengthen women’s business and leadership skills, fostering and sustaining women’s leadership within the organization and promoting joint decision-making at the household level.

To ensure continued impact, the project seeks financial sustainability. While membership fees cover running costs, they fall short of funding professional management. To address this gap, MRs diversify revenues through additional services and training, employing a Training of Trainers (ToT) approach. Over 50% of trainers are women, providing training not only to MR members, but also to external organizations. In addition to brokering machinery, the MR portfolio encompasses advisories, logistics, value chain development, renewable energies, procurement, sustainable agriculture and services for rural smallholder farming communities. Based on the expanding self-sustaining MR business model, a

medium and long-term impact regarding gender transformation can be expected. Contrary to the widespread perception of mechanization being a men's business, this project makes the point that innovations in agricultural mechanization matter to women's empowerment and, if well designed, can act as vehicles for the inclusive and equitable transformation of the agrifood sector.

## Gender as a Feature of Our Work

The project involves close cooperation with partners committed to gender equality that recognize a chance to advocate for equal opportunities. According to Simone Lehmann, Sequa GmbH Project Director, *“the women farmers see the machinery rings as an opportunity to further their education and expand their business activities in order to generate more income. In this way, the MR model contributes to greater gender equality.”* MRs also produce gender-specific benefits for women, as Managing Director of Maschinenring Harburg e.V. Andreas Hastedt elaborates: *“Mechanization services replace human work, which is done mainly by women. The project helps to set free time for developing other income sources for the farmer family. Women have shown more acceptance for the MR project; it affects their own life situation more than that of the men.”*

What is most striking about the project is the way women have appropriated the MR and its positive impacts. The participatory partner approach primed via an institutionalized gender strategy and action plan facilitated this outcome. Gerald Munene, Crop Officer for the County Government of Nyandarua, comments *“mobilising farmers to work in groups is a major milestone towards their development. Once together, women have been able to exchange ideas on viable self-help initiatives, jointly explore and maximize on potential agribusiness opportunities to generate income and access and adopt relevant knowledge on best agricultural practices [...], which has improved crop production.”* Gerald also explains that the MR serves as a platform for empowerment beyond the sector, as it has also trained women to exchange on social issues. *“The women with MR membership are so hopeful that their situation will change through working together,”* he concludes, *“I appreciate the support and the role being played by MR on women empowerment.”*



Following a gender-responsive approach, the project was intended to benefit women from the start. Naomi, an MR member, emphasizes her role, stating, *“Within the machinery ring, my role is one of a machine operator. I am the one who manages the machine.”* She welcomes the changes brought by her membership in the MR, reporting that *“in the future we will be sowing and harvesting with the machines, making the work enormously lighter. If the work is enormously lighter, we can increase our income.”* Grace, another MR member expresses gratitude for the lighter workload: *“I would like to thank the machinery ring for these machines because, since using them, our work has become much lighter. We harvest more and can take care of ourselves. Now, we work with machines and no longer have to spend all of our time in the field.”*

## Implementing Feminist Core Principles

This project exemplifies how locally adapted agricultural innovations can bridge the gender gap and contribute to gender equality. Despite not being explicitly designed for gender transformation, the project has emerged as a flagship challenging gender norms in machinery and agriculture, with potential societal impact. The combination of technical and organizational innovations, along with adherence to participation and representation principles, has played a crucial role. The MR program implicitly incorporates rights-based approaches, notably focusing on gender equality and women's rights. This includes a right to participation and inclusion, which women exercise through their decision-making

power as MR members and leaders, as well as the right to information that empowers communities' decision-making capacities, which is targeted specifically through training programs. In this way, the project aims at the dismantling of structural causes for inequality, easing women's unpaid workload and creating time for alternative activities.

In essence, the project demonstrates how theoretical concepts can translate into intersectional, power-critical interventions in a straightforward manner. An intersectional approach was achieved by specifically targeting rural women farm workers, addressing unique challenges at the intersection of gender and rural living. The participatory adoption of a gender strategy, coupled with a self-help organization led by farm workers, embodies a bottom-up approach, empowering marginalized groups and challenging traditional power dynamics. Gender trainings that target both men and women further exemplify a power-critical approach, fostering a shared understanding of gender dynamics and undermining traditional power structures, thereby promoting collaborative decision-making and equitable participation. This comprehensive approach, rooted in a participatory gender strategy, self-help organizations with women leadership and trainings that target both men and women, claims no explicit postcolonial contribution, but prioritizes local agency and contributes to deconstructing colonial legacies. This fosters a more inclusive and locally-driven model of sustainable development.

## Cooperation

On the international level, the project is managed by a steering committee consisting of GIZ, Sequa GmbH and Bundesverband der Maschinenringe e.V. (BMR), which meets monthly and on an ad hoc basis. Sequa GmbH carried out the gender assessment and women entrepreneurship trainings while BMR focused on the establishment of local MRs and technical trainings. GIZ's i4Ag ensured the alignment with national policies and other projects in the sector and provided the quality assurance of the gender strategy. On the national level, the project activities are coordinated with the National Ministry of Agriculture and Livestock Development. At the local levels, MRs cooperate with the Department of Agriculture, Livestock, Fisheries, Irrigation and Cooperative Development in Bungoma County and the Department of Agriculture, Livestock and Fisheries in Nyandarua County.

Unification among all involved partners demonstrates high commitment to improving agriculture livelihoods and fostering gender equality through agricultural mechanization. This commitment, however, does not equate to unquestioned implementation of theoretical frameworks and policies. Partners share the view that external concepts should not be blindly applied but need translation into local context. The establishment of context-cognizant cooperation across partners and genders is reflected by Andreas Hastedt's statement: *"One must always listen carefully and observe what farmers need, both men and women. Solutions must not be worked out with German glasses, but only together with the people on the ground"*. Cooperating at eye-level means accounting for local's perspectives and working towards solutions in favor of all involved parties. Andreas adds, *"It is not always well received when special offers are made for women only. This can be interpreted as arrogant and know-it-all if the Germans overemphasize this issue"*.

## Outlook

If selected as a prize winner, the award will be split equally between the two regional MRs for onward lending to women's savings and credit schemes to support the startup of their own businesses, adding value to local agricultural products. A new subcommittee of the boards with strong representation of women and youth will manage the revolving fund, and its earnings from interest will finance the provision of tailored local trainings. Thus, it will multiply and strengthen the MRs and contribute to sustaining their activities. Evelyn Tarang, Chairperson of the Kamkoya Machinery Ring, candidly summarizes the project impacts: *"We have come together as a community; we have adopted new technology of using the chisel plough to break the hard pan. With this we expect increased yields with the foods we are planting."*