Women farmers’ access to sustainable agricultural mechanization
A way to reduce drudgery and optimize farm management in Nepal

In Nepal, more than 74 percent of women work in agriculture (World Bank, 2019). Despite their crucial role and responsibility in crop production, their work often remains unpaid, unrecognized, and with high drudgery.

With the massive out-migration of men from the villages, women’s work has increased at both household and farm levels. Women thus face additional work burdens and challenges in securing their households’ food security and livelihoods. There is an urgent need to respond to women farmers’ demands and constraints along the value chain to reduce their drudgery and make their farming more profitable (Ghale and Gurung, 2020).

Women need access to sustainable agricultural mechanization (SAM) to manage their farms efficiently, profitably and timely.

What is Sustainable agricultural mechanization?

Sustainable agricultural mechanization (SAM) considers social, economic and environmental aspects when contributing to the food and agricultural sector. It strives for increased accessibility and promotes the use of improved hand tools, powered machines and equipment. SAM can be applied to all the stages of the food value chains, including:

- agricultural land preparation;
- seeding and planting;
- weed control;
- integrated pest management;
- precise fertilizer application;
- irrigation;
- harvesting;
- preparation for storage;
- value addition; and
- transport.

Source: FAO webpage on Sustainable Agricultural Mechanization fao.org/sustainable-agricultural-mechanization/overview/what-is-sustainable-mechanization/en

Women farmers’ constraints in accessing sustainable agricultural mechanization

Women farmers experience limited access to SAM due to:

- their limited participation in local groups, organizations and networks with access to mechanization services;
- discriminatory social norms that relegate women to low-skilled and time-consuming tasks;
- poor access to information and training on the safe operation and maintenance of powered machines;
- lack of financial services and collaterals to access machines and equipment;
- difficulty in communicating with machinery dealers, sales- and service agents;
- poor gender-responsive information and dissemination strategies at local and national levels resulting in low adoption of mechanization (Baral, 2016);
- limited participation in field demonstrations and testing of the machines at farm level (FAO, 2019); and
- some machines not being adapted to female ergonomics, making the operations more difficult and with higher risks of injuries.

FAO’s fieldwork in Nepal Technical Cooperation Programme (TCP)

In response to the problems and constraints faced by women farmers to access SAM, the Food and Agriculture Organization of the United Nations (FAO) in collaboration with the Government of Nepal (GoN), initiated a Technical Cooperation Programme in Nepal.
About the programme

Title
Sustainable agricultural mechanization of smallholder farms for enhancing agricultural productivity and production, and reducing drudgery of women and young farmers.

Implementing partners
Centre for Agricultural Infrastructure Development and Mechanization Promotion (CAIDMP), Department of Agriculture, Ministry of Agriculture and Livestock Development.

Duration
2019 — 2021

Budget
(USD) 200 000

Target groups
- Women and young farmers
- Young agricultural engineers, extensionists
- Technicians and mechanics
- Machine operators
- Government officials and local authorities

Target areas
Siraha district (Lahan municipality) and Udaypur district (Belaka municipality).

What did FAO and the Government of Nepal do under the programme?

- Carry out a gender-responsive mechanization assessment to identify local mechanization needs and opportunities (FAO, 2021a).
- Organize training on business development skills, machinery operation, maintenance and repair.
- Hold awareness-raising sessions on gender and social issues around mechanization at national and local levels.
- Facilitate the formation of two custom hiring centres (CHC) and mechanization committees.
- Procure the machinery and equipment for the CHC to provide mechanization services.
- Coach beneficiary farmers.
- Analyse existing agricultural mechanization and gender policies and programmes with Key Informant Interviews (KII) and provide recommendations for improvements.
- Document and disseminate knowledge materials at national and local levels.

What are the results of the programme?

The project established two CHC managed by mechanization committees represented mostly by women, who made up more than 75 percent of the committee (FAO, 2022). Custom hiring centres provide mechanization services for a fee to their members.

The established CHC benefit more than 250 members in the two districts through access to timely mechanization services for rice, maize, wheat and vegetables value chains (FAO, 2022). Their establishment allowed reducing drudgery, improving farm management and saving time and money.

Custom hiring centres are equipped with a diverse range of machines, tools and equipment to respond to the demand for mechanization services throughout the year. The machines and equipment owned by the CHC include two-wheel tractors and trailers, mini-tillers, planters, transplanters, weeders, reapers, mobile thresher, dehuskers with corn sheller, combined dehusker and mill, and solar dryers. These centres also serve as extension enterprises for farmers to observe, test or use agri-machinery (FAO, 2021b).

Sources

FAO. 2022. Terminal report “Technical support for sustainable agricultural mechanization of smallholder farms for enhancing agricultural productivity and production, and reducing drudgery of women and young farmers” (internal document)