

Farm mechanisation and conservation agriculture for sustainable intensification



Key details

Location

Ethiopia, Kenya, Tanzania, Zimbabwe

Duration

Start Mar 2013

End Dec 2019

Budget

AUD 5,150,955

Commissioned organisation

International Maize and Wheat Improvement Center

Partners

African Conservation Tillage Network; Charles Sturt University; Directorate of Research and Development; Ethiopian Institute of Agricultural Research; Food and Agriculture Organisation of the United Nations; Indian Council of Agricultural Research; Institute of Agricultural Engineering; International Development Enterprises; International Food Policy Research Institute; Kenya Network for Dissemination of Agricultural Technologies; Kenya Network for Dissemination of Agricultural Technologies; Selam Awassa Business Group PLC; University of Zimbabwe

Project Leader

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Program

Global

Project code

FSC/2012/047

Overview

This project aimed to accelerate delivery of two-wheel tractor-based technologies to smallholder farmers in Eastern and Southern Africa, and help them adopt the technology.

This improved access to mechanization, reduced labour drudgery, and minimised biomass trade-offs.

Sub-Saharan Africa needs sustainable intensification of agriculture. Research for development work is increasing the efficiency with which land, water and nutrients are being used, but farm power appears to be a forgotten resource.

Farm power in Sub-Saharan Africa countries is declining because most tractor hire schemes have collapsed, and the number of both draught animals and human labourers has declined. Low farm mechanization causes high labour drudgery, which disproportionately affects women.

For sustainable intensification in Sub-Saharan Africa to work, the farm power balance must be improved through increased power supply (via improved access to mechanization) and/or reduced power demand (via energy saving technologies such as conservation agriculture).

Project outcomes

- Evaluated and demonstrated two-wheel tractor-based technologies to support CA systems, using expertise and implements from Africa, South Asia and Australia.
- Tested site-specific commercial systems to deliver two-wheel tractor-based mechanization.
- Identified improvements in national institutions and policies for wide adoption of two-wheel tractor-based mechanization.
- Improved capacity and created awareness of two-wheel tractor-based technologies in the sub-region, and shared knowledge and information with other regions.



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