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FACASI

The overall goal of the project is to improve farm power balance, reduce drudgery, and minimize biomass trade-offs in Eastern and Southern Africa, through accelerated delivery and adoption of 2WT-based technologies by smallholders.

Enabling Policies for Wider Adoption and Expansion of Smallholder Mechanization

Smallholder mechanization is one of the main components of agricultural production and productivity growth. Use of farm machinery and equipment reduces labor drudgery, saves farm power, helps timely land preparation, and allows operating relatively larger farm plots. However, the level of smallholder mechanization in a given country depends on past and present policy support for enhancing the enabling environment for wider adoption and expansion of farm machinery use. These policies include providing direct incentives through subsidies and/or import tax exemptions and indirect support by facilitating access to machines and making machinery use cheaper compared to other options.

A three-day policy review workshop was held under the Farm Mechanization and Conservation Agriculture for Sustainable Intensification (FACASI) project in Harare, Zimbabwe, on 3-5 August 2015. The main objective of the workshop was to make an inventory of national policies and review their direct and indirect effects on wider expansion and adoption of smallholder agricultural mechanization in the project's target countries (Ethiopia, Kenya, Tanzania, and Zimbabwe). Accordingly, workshop participants listed all policies and regulations that could potentially affect smallholder mechanization in general and then identified whether these policies and regulations were in place in the target



Workshop participants (from left to right): Moti Jaleta, Raymond Nazare, Tom Agwa, Paswel Marenja, Walter Mupangwa, Yared Deribie, Eric Njau, and Frederic Baudron.



Australian Government
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International Food
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Centre



International Maize and Wheat Improvement Center



Workshop participants discussing country specific policy effects on the expansion of smallholder mechanization. Tom Agwa (second from right) presented major policies affecting smallholder mechanization in Kenya.

countries. Then they reviewed, for each specific country, how the existing policies positively or negatively affect the expansion of smallholder mechanization.

Workshop participants listed relevant policies and clearly mapped how these policies and policy instruments affect smallholder mechanization. The identified policies were: agricultural mechanization policy/strategy; agricultural intensification/transformation policy; livestock policy; labor use policy; import policies on farm machines (including farm implements, spare parts, fuel, and lubricants); industrial policies (incentives for local manufacturing, absorbing labor in the industrial sector, subsidies on machinery purchase or distribution); policies on research, extension, and development; environmental policy; business environments (public-private partnerships); mechanization related regulations and enforcements (machine mobility on highways, quality, and standards); infrastructure in rural areas (national and local roads, electricity supply, etc.); finance, credit, insurance, pricing policy on agricultural commodities, etc.

From the assessments made during the three-day workshop, the four countries have slightly different policy environments regarding the promotion and expansion of smallholder mechanization. Some countries provide subsidies to encourage the importation and expansion of

farm machines that are adequate for smallholder farming. Others are still focusing mainly on large machines. There is a mix of public and private sector involvement in the smallholder machinery business. None of the four countries has a clear mechanization policy, though two of them have recently developed an agricultural mechanization strategy.

In addition to the national policy review document, a summary table was developed for each country to identify key policies and how they encourage or discourage smallholder mechanization. Participants also discussed the contents and potential participants of the upcoming national policy dialogue to be conducted in each target country with the aim of evaluating the effects of the existing policies related to smallholder mechanization. The planned policy events will also evaluate which potential policies need to be in place to facilitate the wider expansion of smallholder mechanization in the respective countries.

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FACASI Tanzania Engages Private Sector Partners to Supply Two-Wheel Tractors



Entrepreneur Mr. Daudi Ami with his newly bought two-wheel tractor and trailer.

Selian Agricultural Research Institute (SARI) and Farm Equip, a farm machinery dealer for four- and two-wheel tractors (2WTs) in Tanzania, have agreed to join hands to build sustainability of 2WT services beyond the FACASI project lifetime. Farm Equip imports these farm machines and supplies them to different areas of Tanzania. It has also been providing post-sale services to farmers and spares/repair workshops and is interested in working with rural entrepreneurs and smallholder farmers. To date, the company has sold more than 2,000 2WTs with accessories.

In the FACASI project, private sector involvement is key for building enduring partnerships and unsubsidized business models. Farm Equip and FACASI have agreed to conduct joint field demonstrations of 2WTs and their attachments. In one such event held on 20-29 July 2015, FACASI and Farm Equip conducted field demonstrations of different 2WT-based ancillaries (multi-crop sheller, no-till planters, and trailers) in Bargish Uwa and Dongobesh villages in Mbulu district and in Maweni village in Arumeru district. FACASI demonstrated different direct seeders, threshers-cum-straw choppers, and trailers. The very successful demonstration was attended by a total of 237 farmers; of these, 60 were female farmers.

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In another event, the FACASI project participated in the Nanenane national agricultural show in Arusha. During the ten days of the show, which was held the first week of August 2015, the FACASI pavilion was visited by more than 1,000 people, including farmers, traders, manufacturers, students, and government officials. The outcome of this show was the creation of high demand for zero-till planters (particularly the versatile multi-crop planter, or VMP), shellers, and rippers. More than ten farmers were linked to the manufacturers of preferred equipment.

The dealer-led Farm Equip business approach is one of the business models being studied by the FACASI project. The project is working closely with Farm Equip to establish another model termed “contractual /leasing” model.

The other FACASI partner in Tanzania is the Centre for Agricultural Mechanization and Rural Technology (CARMATEC), which has the engineering role of laboratory testing of two-wheel tractors, manufacturing of implements, and modification of attachments to suit farmers’ needs. Following agreed flexibility for the FACASI project to extend beyond the initial Mbulu and Arumeru project sites, more joint field demonstrations are planned for the coming cropping season in various communities in the Manyara region.



Participants in the FACASI-Farm Equip demonstration in Magara village, Babati district, being exposed to the Fitarelli zero-till, single-row seeder.

Using Different Awareness Strategies to Promote the Use of Two-Wheel Tractors – Zimbabwe



Briefing farmers at a demonstration plot.

Knowledge about the use of the two-wheel tractor (2WT) for farm mechanization is limited in Zimbabwe. Government efforts to introduce the technology were not very successful, as the 2WT was tested on conventional tillage agriculture. However, with introduction of the FACASI project in Zimbabwe, interest in the technology is growing as the project proves that the use of 2WTs is possible under conservation agriculture.



Harare Agricultural Show.

To create more awareness, the FACASI project is using a variety of dissemination channels, including radio and television presentations, newspaper articles, agricultural shows, seminars, workshops, exhibitions, and demonstration plots targeting different stakeholders. So far, oral presentations have been made at seminars and workshops, while demonstrations of equipment (two-wheel tractors, planters, sprayers, and shellers) have been set up at different fora. Presentations have been made at agricultural shows at both provincial and district levels across the country. Exhibitions have been made at national agricultural shows, research centers, and at the Intellectual Expo at the National University of Science and Technology. Farmers, extension workers, community leaders, colleges, and universities have been targeted by these campaigns.

As a result of these targeted campaigns, interest in the technology has been increasing, especially among farmers and colleges. Farmers have shown interest in acquiring their own 2WTs and ancillary equipment. However, the Government and the private sector still face the challenge of supplying the demanded equipment at affordable prices.

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Field Demonstrations for Awareness Creation and Market Development: Seeing Is Believing!

"I have known tractors for many years, big ones, being used for plowing, but I would not imagine such a small tractor could do all these tasks: planting, transporting, shelling, forage chopping, pumping water. I was eagerly waiting for this demonstration day once CIMMYT and iDE experts told me about the multi-functionality of walking tractors some days ago. Now I see it working and I can say seeing is believing." This was how a member of a women's group expressed her excitement after attending a field demonstration day.

The Ethiopian chapter of FACASI-CIMMYT, in collaboration with iDE Ethiopia, organized a field demonstration on 3 September 2015 in Ziway, one of the project sites in Ethiopia, to demonstrate the use of two-wheeled tractors (2WTs) and implements. The demonstration was attended by 73 (17 female) representatives of District Agricultural Bureaus, cooperatives, women's groups, model farmers, and service providers. The demonstration showed the multi-functional use of the 2WT in planting, ripping, pumping, shelling, threshing, and transportation.

Of particular interest to the participants was the MUST that incorporates multiple operations – shelling, threshing, and chopping – in a single machine. The MUST was designed and manufactured by CAMARTEC of Tanzania with funds provided through FACASI's International Mentoring Platform. The representatives of the District Agricultural Bureaus expressed their appreciation of the technology as a way to reduce farm drudgery, particularly for women, increase agricultural productivity, and create jobs by providing hiring services. The Bureaus expressed a commitment to promote the technology by providing financial

and full administrative support. The field day also provided an opportunity for private sector service providers to meet with farmers to discuss their businesses and offer transportation and other services in the Ziway area. One of



the service providers mentioned that he had been providing transportation service for over a year, generating a daily income of ETB 700–1000 (US \$35–50).

After the demonstration, quite a number of farmers expressed an interest in going into the mechanization service provider business and asked the project and agricultural bureaus to facilitate their access to the technologies and financing. The project is now looking into how to facilitate the provision of financing through micro-finance institutions and private sector partners.

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Scholarship Announcement

Charles Sturt University is offering the following prestigious scholarships on a yearly basis for both domestic and international research candidates. **The scholarship round will have a closing date of 31 October of each year.** These scholarships seek to recognize outstanding academic achievement. For further information and details of individual scholarships including criteria and how to apply, please click [here](#).

The following four scholarships have **NO nationality** restriction.

- Australian Postgraduate Award
- Charles Sturt University Postgraduate Research Scholarship
- International Postgraduate Research Scholarship
- Faculty of Business –Entrepreneurship Scholarship (to be offered for the first time in 2016)

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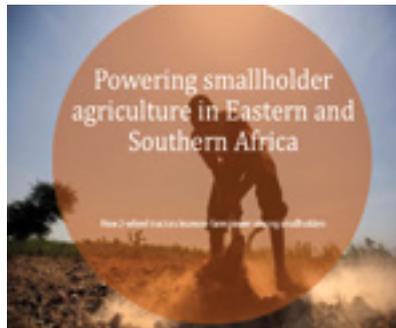
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FACASI Launches Two New Communication Products

The FACASI project has launched two communication products. In a bid to raise more awareness about the two-wheel tractor and how the FACASI project is promoting its use among small holder farmers, two communication products, the Photo Story Book and Video Clip titled “Powering smallholder agriculture in Eastern and Southern Africa” illustrate a pictorial journey to illustrate how farm power is a forgotten resource and yet its demand is increasing. The video clip and the story book showcase how two-wheel tractors can be used to overcome the challenge of farm power and drudgery among smallholder farmers.



The Video clip can be viewed at [here](#) and [here](#). And the photo story book can be downloaded [here](#).



To contribute articles and more information about the FACASI project, please contact:

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