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ALL ABOUT THE FRAMEWORK FOR SUSTAINABLE AGRICULTURAL MECHANIZATION IN AFRICA - F-SAMA

African Union

Food and Agriculture Organization of the United Nations

Joint Actions on Operationalization of the Framework for Sustainable Agricultural Mechanization in Africa (F-SAMA)

HYBRID WEBINAR No. 14 | Date: Tuesday, 23rd July 2024 | Time: 06:00 – 08:00 hrs GMT

Scaling Conservation Agriculture in Africa: Contextual Innovations for Closing the Research to Impact Gaps

Accumulated positive experiences and scientific knowledge about Conservation Agriculture (CA) are leading to its rapid adoption worldwide. Farmers now apply CA on over 205 million hectares (15% of the world's annual cropland area) in over 100 countries across a diverse range of agroecological zones and farm sizes, in all continents. It has enhanced farm production and reduced costs while conserving and enhancing the natural resources of land, water, biodiversity, and climate. This value proposition aligns well in the context of mitigating increasing input costs prices (fertilizer, energy/fuel, and labour), and climate change challenges.

Conservation Agriculture is the largest existing model of climate-smart agriculture (CSA) worldwide in terms of surface area, with over 3.2 million hectares of annual cropland in Africa, about 1.5% of the global area under CA. The number of African countries opting to adopt CA as a core production component of climate-smart agriculture has increased exponentially, from 9 to 14 to 25 in 2008/09, 2013/14, and 2018/19 respectively. Likewise, the area under CA has also increased more than five-fold increase from 485,230 ha to 3.2 million ha over the same period of ten years. This achievement is still far below expectations and potential.

Scaling CA in Africa faces significant challenges, primarily due to economic barriers and limited knowledge among smallholder farmers. The initial costs associated with transitioning to CA, such as acquiring specialized equipment and appropriate seeds, often prove too steep for farmers operating on tight margins. Furthermore, a lack of awareness about the long-term benefits of CA, like enhanced soil health and increased yields, impedes its adoption. Effective scaling of CA thus requires a whole systems approach that tackles resource constraints and institutes large-scale and extensive educational programs including dense networks of demonstrations and learning sites to present credible and consistent information to farming communities about the practical advantages of these sustainable agricultural practices.

Adoption and practice of CA require appropriate and specialized tools, equipment, and implements that enable farmers to coherently implement the three principles of CA effectively. Minimum mechanical soil disturbance cannot be implemented without the right machinery. Thus, scale-appropriate CA-based sustainable agricultural mechanization is paramount to the spread and scaling of CA.

In the endeavour to making sustainable agricultural mechanization in Africa (SAMA) environmentally sustainable, the Framework for Sustainable Agricultural Mechanization in Africa (F-SAMA) adopted Element 6: *Sustainable transformation of land preparation and crop/animal husbandry practices*, which aims to transform crop production techniques from current conventional tillage methods to sustainable agricultural practices, such as CA adapted to local conditions. The F-SAMA, launched in 2018, has ten priority elements geared towards informing policy and decision-makers in the Member States, the Regional Economic Communities (RECs) in Africa, and the wider development community dealing with agricultural development on the significance of mainstreaming SAM in their overall national and regional agricultural development programmes.

AfricaMechanize www.africamechanize.org is a SAM platform aiming to enhance knowledge management, information sharing, networking, and partnerships in Africa. The platform has been developed to support the AU and FAO to operationalize the F-SAMA initiative, with FAO providing technical support and the African Conservation Tillage Network (ACT) providing secretariat functions. The platform was developed following recommendations from the December 2016 stakeholders' consultative meeting co-organized by FAO, World Bank, AGRA, ACT, and others in Nairobi Kenya. The need for an information platform for SAM in Africa is further reinforced in Element 10 of the F-SAMA as one key *option of sustainable institutions for regional cooperation and networking*.

From November 2020 to June 2024, twelve webinars were conducted with Directors of Agricultural Mechanization and Engineering Services [DAMES] and other stakeholders of SAM in Africa on the ten priority elements of F-SAMA and operationalizing the framework in Africa. The webinars attracted more than 1,837 participants and 75 speakers from over 75 countries globally (45 from Africa). The virtual discussions were conducted through the AfricaMechanize information platform and jointly organized by FAO, AUC, ACT and other key mechanization stakeholders in Africa.

This hybrid parallel event at the Ninth World Congress of Conservation Agriculture (9WCCA) is dedicated to addressing a significant challenge within the CA research system: closing the research-to-impact gaps and doing so in an accelerated manner given the current climate crisis. It presents an opportunity for Africa to share best practices and strategies for scaling regenerative CA and learn from practical global research, international farming best practices, and the broader agricultural industry.

Some of the underlying issues requiring demystifying and reprioritizing include:

- **Enabling farmer learning:** Role of inclusive and participatory approaches that empower farmers with practical knowledge and skills.
- **Community embedded research and learning field sites:** Role of local hubs for continuous education and demonstration of CA practices.
- **Improving extension systems:** Enhanced extension frameworks to provide robust and adaptive support for farmers.
- **Private and public partnerships:** Role of efficient collaboration between private entities and public institutions to foster innovation and mobilize resources.
- **Data systems for rigorous scaling analytics:** Role of advanced data systems supporting evidence-based and impact-driven scaling efforts.

We have put together an eminent panel to discuss a diverse number of topics. The keynote presentation, **Inclusive Learning Landscapes for Conservation Agriculture** will provide new thinking on how to bridge the divide between innovative research and tangible outcomes on the ground. The focus of the keynote address will be on learning landscapes and related approaches as vehicles for accelerating the translation of research into use. In-depth discussions with the panel and audience interactions will bring out the macro and micro drivers, enablers and impediments to scaling CA in the diverse contexts of Africa.

The **Objective of Webinar 14** is addressing a significant challenge within the CA research system: closing the research-to-impact gaps and doing so in an accelerated manner given current climate crisis.

The Expected Outputs of this webinar include:

i) *A dedicated newsletter* summarizing the key issues discussed and recommendations to expedite scaling CA.

ii) *A post-conference technical briefing that captures the essential strategies and insights shared during the event for effectively scaling CA in Africa. This briefing will offer a concise summary and actionable recommendations for stakeholders.*

The estimated **200 Participants** in Webinar 14 will be drawn mainly from private sector agricultural machinery manufacturers, farmers' organizations, not-for-profit organizations, Directors of Agricultural Mechanization and Engineering Services [DAMES] from all African countries, representatives of the Regional Economic Communities [RECs], AUC, FAO and the ACT Network.

The hybrid event will be held as session 6, venue 2, at the Cape Town International Convention Centre, South Africa, and simultaneously shared online from **06:00 – 08:00 hrs GMT on Tuesday 23rd July 2024**, using the Zoom communication tool, in both **English and French.**

AGENDA

Date: Tuesday, 23rd July 2024 | Time: 06:00–08:00 hrs GMT | Time: 08:00–10:00 hrs Cape Town

06:00	**Welcome and Opening Remarks** • **Paswel Marenya,** CIMMYT
06:05	**Next Generation Research Infrastructure for Accelerated Scaling and Impacts** • **Sieglinde Snapp,** CIMMYT
06:30	**What drives adoption on small farms?** Evidence from Eastern & Southern Africa • **Hambulo Ngoma,** CIMMYT
	Scaling soil fertility restoration in Zambia: Linking farmer field schools, extension, and input provision. • **Klaus Droppelmann**, Independent Expert.
	Going Big: Ingredients for the Morocco green growth vision of 1 Million Hectares under CA by 2030. • **Rachid Moussadek,** INRA/ ICARDA.
	Low cost for high impact innovation: Enhancing adoption of mechanized CA in Africa by smallholder farmers. • **Nawfel Roudies,** UM6P/ Al Moutmir
	Data is Oxygen: AfricaMechanize platform and its role in information dissemination on F-SAMA • **Philip Wanjohi,** ACT Network.
07:05	**In-depth moderated panel discussions** • **Paswel Marenya,** CIMMYT
07:30	**Q&A from audience, and summary remarks** • **Paswel Marenya** (CIMMYT) and the Panellists.
07:55	**Closing** • **Reynolds Shula,** ACT Network

The hybrid in-person and virtual/webinar event series is organized by:

Food and Agriculture Organization of the United Nations (FAO)
www.fao.org.

The African Union
https://au.int/

African Conservation Tillage Network (ACT)
www.act-africa.org

The session will provide short keynote presentations followed by interactive and in-depth discussions with the panel and audience interactions of the drivers, enablers and impediments to scaling.

Do not miss the opportunity for your views to be heard and considered in shaping the CA adaptation and scaling agenda by participating in the session. **Registration is free but required** to participate in this webinar. **Register in advance** at the: Registration Link.

The events, webinars and discussion forums are being organized by the interim F-SAMA steering committee, comprised of AUC, FAO, and the ACT Network.

For more information, contact:

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- Josef Kienzle, Agricultural Engineer (Sustainable Mechanization). Leader of the Sustainable Agricultural Mechanization Group in the Plant Production and Protection Division (NSP) of FAO, Rome, Italy: (Email: Josef.Kienzle@fao.org);
- Saidi Mkomwa, Executive Director, African Conservation Tillage Network (ACT), Nairobi, Kenya. (Email: saidi.mkomwa@act-africa.org).