



Updates & News Alert

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Editor's view: Introducing the October 2019 CA Alert



A female farmer uses oxen to rip lines for CA planting in Ethiopia (photo: Terepeza Development Association, courtesy of CFGB)

The Farm Mechanization and Conservation Agriculture form the most critical components of Sustainable agriculture (Intensification). According to FAO, Sustainable mechanization adopts Conservation Agriculture principles and practices to enable agriculture to be both productive and profitable for farmers while at the same time contribute to conserving resources and the ecosystem. As the effects of climate change and natural resource depletion become more visible, the large-scale adoption of sustainable agriculture practices – which protect the soil, conserve water, use less energy and more efficient and precise use of

inputs – will be essential to maintain and sustainably improve food production and distribution.

With increasing demands for food and agricultural products being exerted on the planet's natural capital base, the essential role for sustainable mechanization in sustainable production systems becomes increasingly imperative and any attempts to revitalize agriculture in Sub-Saharan Africa must be based on these overarching principles and practices.

In the recently launched [Sustainable Agricultural Mechanization: A framework](#)

[for Africa \(SAMA\)](#), ten interrelated principles/ elements that guide Sustainable Agricultural Mechanization in Africa are presented. In addition, technical issues to be considered under the framework and the options to be analysed at the country and sub-regional levels are also illustrated. This calls for a specific approach, involving learning from other parts of the world where significant transformation of the agricultural sector through mechanization has already occurred and policies and programmes have been developed to enable realization of Africa's aspirations of Zero Hunger by 2025 and achievement of Agenda 2063.

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Therefore, in order to facilitate effective promotion of Conservation Agriculture based mechanization in Africa, appropriate and affordable agro-ecological and socio-economic based technologies and innovations need to be emphasized and developed. In this regard and considering the need to contribute significantly to attainment of this strategy, ACT has continued to evolve taking the lead in facilitating, coordinating and enabling knowledge and information sharing among the African's agricultural actors and practitioners. It has partnered with other crucial organizations and development partners in order to synergistically establish and execute appropriate knowledge and information sharing platforms and systems tailored to different target groups at different levels in the continent and beyond as well as implement projects and programs focused on transforming African agriculture.



We wish to remind you that ACT **CA newsletter app** available on **Google**

play store: <https://t.co/t1kFJIHgP0>, thus you can now read the previous issues on Conservation Agriculture news and manoeuvre to ACT website through the updates section menu.

Nonetheless, ACT acknowledges the various sources, authors, reporters, organizations and practitioners whose articles appear in this October 2019 issue, their geo-diversity is a clear testimony of the enthusiasm and interest from various organizations, countries, researchers and scientists in Africa towards Conservation Agriculture. We encourage you to share your CA views and articles capturing the status and extent of adaptation and adoption of CA in any Country in Africa or beyond for sharing with others. Please submit articles, links or views to kim@act-africa.org. You can also use the **#conservationagriculture**, **#africamechanize** to share links on articles, journals, news on CA and tag us on twitter **@ACTillage**.

Apologies for any cross posting of some articles.

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Championing Rural women as leaders in Africa's Agricultural Development



African Union, FAO, and partners inaugurated a symbolic statue towards retiring the hand hoe to the museum

The African Union Commission (AUC), the Food and Agriculture Organization of the United Nations (FAO), the Government of Burkina Faso, and partners inaugurated a statue in Burkina Faso that symbolizes the retiring of the handheld hoe to the museum as part of the international rural women's day celebrations on 15 October 2019.

Human muscles, mostly from women, the elderly and children provide over 60 percent of Africa's farm power, which inhibits rural women from improving their productivity and reduces their contributions to the agricultural sector. The erection of the monument aims to commemorate the continent-wide initiative of

alleviating women's backbreaking farm and post-farm work. It is also intended to challenge African governments to give priority to agricultural mechanization as an area for strategic investment.

In remarks made at the event, Ambassador Josefa Sacko, AUC Commissioner for Rural Economy and Agriculture, highlighted the need for Africa to transform its agriculture and reduce the drudgery of farm and post-farm work for rural women. She also indicated that rural women are the backbone of economies and can contribute to the agricultural productivity of nations, as they are the feeders of the family. [Read More.](#)

Pulses, cobs and a healthy soil prove the success of a rural innovator

Long-term research on climate-smart agriculture in Malawi has improved the productivity, resilience and prospects of Mary Twaya, a single mother of three. Mary Twaya is an exemplary farmer in Lemu, a rural drought-prone community in southern Malawi, near Lake Malombe. On her one-hectare farm she grows cotton, maize, and legumes like groundnut and cowpea, which she just picked from her fields. Since agriculture is Twaya's sole livelihood, it is important for her to get good harvests, so she can support her three children and her elderly mother. She is the only breadwinner since her husband left to sell coffee in the city and never returned.

Research from the International Maize and Wheat Improvement Center (CIMMYT) shows that there are multidimensional benefits for women farmers to switch to climate-smart agriculture practices, such as planting drought-tolerant maize varieties and Conservation Agriculture with no tillage, soil cover and crop rotation and associations.

Twaya was part of a CIMMYT project that brought climate-smart agriculture practices to smallholder farmers in Malawi, Zambia and Zimbabwe. She was enthusiastic about adopting climate-smart agriculture practices and Conservation Agriculture strategies in her plot. "I have always considered myself an active farmer, and when my husband left, I continued in the project around 2007 as part of the six lead 'mother farmers' with about 30 more 'baby farmers' learning through our field trials," Twaya explained.

"We worked in Lemu since 2007 with Patrick Stanford, a very active and dedicated extension officer who introduced Conservation Agriculture to the village," said CIMMYT agronomist Christian Thierfelder. "Farmers highlighted declining yields. The Lemu community was keen to transform their farming system, from conventional ridge tillage to more sustainable and climate-adapted cropping systems." This was



Plate 3: Mary Twaya at her CA farm

an ideal breeding ground for new ideas and the development of climate-smart solutions, according to Thierfelder.

Showing her demonstration plot, which covers a third of her farm, Twaya highlights some of the climate-smart practices she adopted. [Read More](#)

Scaling Up Conservation Agriculture in Kenya



Crop species grown in association

Over 70 per cent of people living in rural areas take part in various agricultural activities including farming and livestock keeping. Most of these are small scale farmers. Agriculture contributes 26 per cent of the country's Gross Domestic Product (GDP). Therefore, the need to improve and strengthen the performance of the agricultural sector is a precondition for attaining constant growth. In recent times, however, farming is facing major challenges associated with low soil nutrients, pests, and diseases. This has necessitated the need to change from conventional

farming to sustainable farming systems.

Regarding this, organizations are creating awareness of Conservation Agriculture (CA) as a technique of sustainable agricultural practice. Food and Agriculture Organization of the United Nations (FAO) is actively engaged in promoting CA in different parts of the country. FAO is a main stakeholder of the agricultural sector in Kenya and helps the government in the implementation of agriculture.

The organization's partnership with the Kenyan government is evidenced

by the development of the FAO Country Programming Framework for Kenya (CPF) 2014-2017. "It outlines the organization's contribution to the achievement of national agricultural priorities and objectives as defined in key government policy documents," avers Luca Alinovi, FAO Representative in Kenya. The CPF document, which assesses the status of agriculture in the country, was developed after thorough consultation with key stakeholders.

According to Alinovi, adopting CA practice is beneficial at the regional, local, as well as at the farm level. "CA is an approach to managing agro-ecosystems for better and sustained productivity, food security and increased profitability while preserving the environment," he observes. Conservation Agriculture aims at achieving sustainable agriculture and superior livelihood for farmers. There are growing numbers of smallholder farmers in Kenya who are successfully implementing CA practices adapted to specific local conditions and existing crop and livestock production customs. [Read more](#)

Rwanda Approves Howard G Buffett Sponsored Conservation Agriculture Institute



RICA students at work

The cabinet, chaired by President Paul Kagame yesterday approved the

Rwanda Institute for Conservation Agriculture (RICA). The cabinet approved ministerial order establishing RICA to operate as a private institution. Sponsored by the American's Howard G Buffett Foundation, the institute is located in Karama village of Bugesera district – Eastern Province.

It aims at educating the new generation of entrepreneurs. “Our campus is custom-made to train future innovators using a hands-on, experiential

approach. We’re teaching students to be strategic thinkers and problem-solvers, equipped with the communication, leadership, and entrepreneurship skills for career success,” reads part of the note on the website.

“Our curriculum emphasizes Conservation Agriculture and One Health principles, as we teach students farming, mechanization, and irrigation techniques that improve agriculture productivity.” RICA students will earn a Bachelor of Science degree in Conservation Agriculture, in the institution’s three-year, internationally recognized program. The school is one in a series of philanthropic initiatives of Howard G Buffett Foundation in Rwanda where they pledged to possibly inject \$ 500 million. [Read More](#)

New farming method brings cheer and cash



PAFID field officer Josphat Muema trains farmers on Conservation Agriculture. Photo-David Muchui NMG

Four years ago, Peris Wamaitha was a distraught farmer, only managing a meagre two bags of maize from her one-and-half acre piece of land. Located on a steep slope in Kaithe, about nine kilometres from Meru town on the Maua road, the once unproductive land now yields up to 15 bags of maize on half an acre, thanks to Conservation Agriculture. This kind of farming involves minimum tillage, retaining crop residue as mulch, crop rotation, intercropping as well as proper use of herbicides, pesticides and other chemicals.

“Soil is a major carbon sink and its continued turning for planting greatly

contributes to climate change,” says Nixon Wafula, a field officer at Participatory Approaches for Integrated Development (PAFID). which is promoting the model as a key weapon in reviving soil fertility and addressing the effects of global warming. “We encourage farmers in the country to abandon the disc plough and instead use a ripper or a hoe. A disc plough creates a hard pan in the soil, greatly increasing the chances of erosion.”

Wamaitha says before started practising Conservation Agriculture in 2015 after being trained by PAFID, a non-governmental organisation, her

homestead could often be engulfed in floods during the rainy seasons. “I was giving up on farming. When I was introduced to Conservation Agriculture, I tried it on half an acre,” the widow said.

“Harvesting 15 bags of maize on half an acre piece without much labour was a pleasant surprise. Since then, I don’t plough my farm. I conserve the soil instead.” Wamaitha only makes holes with a *jembe* ahead of planting as opposed to hiring a disc plough tractor to prepare the land. [Read More](#)

Cover Crops Can Triple the Amount of Earthworms in Soil

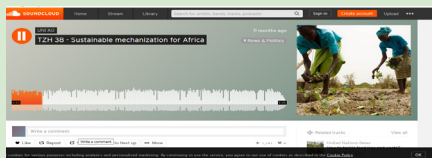


The most well-known benefit of using a cover crop—often a legume planted off-season—is in lending more nitrogen to the soil. And that's vital, but there are more indicators and elements to healthy soil than just nitrogen. [A new study from Cranfield University](#), in the UK finds that cover crops also make the soil friendlier for earthworms.

The use of cover crops is very old, but modern science is still figuring out exactly how they work, partly to maximize the health, stability, and yield of today's farms. The new research from

Cranfield University extends previous knowledge about what cover crops can do for one of the farmer's great natural friends: the earthworm. Earthworms are a vital component of many healthy soils, digesting plant waste like corn husks and depositing their own waste as vibrant, fertile topsoil. A large earthworm population is a solid indicator of good soil health. The Cranfield research found, in a wheat, maize, and lettuce farm in Cambridgeshire, that the use of cover crops could as much as triple the number of earthworms in the soil. [Read More](#)

Video Resources on Conservation Agriculture (CA) and sustainable agricultural mechanization (SAM)



Interview by Charlotta Lomas, FAO

Listen to [this interview on the link https://soundcloud.com/unfao/africa-mechanization](https://soundcloud.com/unfao/africa-mechanization)

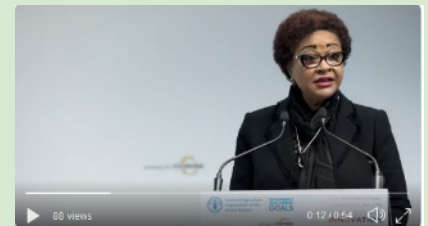
Sustainable Agriculture mechanization for Africa: Expert Opinion

More than 75 percent of farmers in sub-Saharan Africa prepare their lands

using only hand tools. It's a practice that results in poor productivity and repels young people. Which is why the UN Food and Agriculture Organization, FAO, and the African Union have developed a framework to roll out sustainable farm mechanization across the continent. The aim is to reduce drudgery, increase agricultural efficiency and boost food security.

On this episode of Target Zero Hunger (TZH) 38, interview by Charlotta Lomas, FAO, we hear from Her Excellency Josefa Sacko, African Union Commissioner for Rural Economy and Agriculture, and Joseph Mpagalile, an agriculture engineer and expert at FAO. Listen to the [interview](#)

Agricultural Mechanization, A key Tool for African Farmers



Increasing agricultural productivity, thereby eliminating hunger in Africa by 2025 will be no more than a mirage unless mechanization is accorded utmost importance. [View](#)

Securing the future through Conservation Agriculture | Kenya | MCC

Agriculture in arid and semi-arid lands of Machakos, Makueni and Kajiado counties in Kenya depends on rainfall. Keeping crops properly watered has always been a challenge in these regions, and recently has been intensified by climate change. [view](#)



Securing the future through conservation agriculture | Kenya | MCC

2019 Events and Opportunities

Advanced Course: Conservation Agriculture: Gateway for Sustainable Intensification of Smallholder Systems



The advanced course on Conservation Agriculture will offer a unique capacity development opportunity to the scientific community associated with natural resource management research for development (NRM4D).

This course was initiated in 2010 and this is its 10th edition, which now includes participants from both Asia and North Africa. It is organized by the International Maize and Wheat Improvement Center (CIMMYT) and the Borlaug Institute for South Asia (BISA), with support from the CGIAR Research Programs on Maize (MAIZE), Wheat (WHEAT) and Climate Change, Agriculture and Food Security (CCAFS). The course is organized in close collaboration with national agricultural research systems and partners in the region.

This course links the advances and multidisciplinary approach for sustainable intensification of maize- and wheat-based systems in particular, and cereal- and legume-based systems in general. It will share technologies and strategies for restoration of natural resources and climate-resilient production systems, drawing from the expertise of CIMMYT researchers and partners across Asia, Africa and the Americas. [Read more](#)

Uganda Regional experience sharing Meeting on SAM hire service provision

ACT and FAO are organizing a Regional workshop on sharing knowledge, experiences and opportunities for investment and partnership on Sustainable Agricultural Mechanization hire services provision practices along the food value chain. The objective is to bring together critical stakeholders and actors along agrifood value chain to share knowledge, experiences and opportunities on Sustainable Agricultural Mechanization hire services along the food value chain.

Specifically, the workshop intends: *i)* To enable the various stakeholders to share knowledge and practices on Sustainable Agricultural Mechanization along the agrifood Sustainable Agricultural Mechanization value chain; *ii)* To create awareness on the opportunities offered by Sustainable Agricultural Mechanization hire services provision and on the role of capacity development in enhancing hire service provision; *iii)* To expose participants to the role of Conservation Agriculture in agricultural productivity and environmental degradation; and *iv)* To sensitize the Country's stakeholders on the need to develop investment roadmap and partnership plan on SAM

The workshop will take place on 9th – 12th December, 2019, at Imperial Royale Hotel in Kampala, Uganda. For more information contact ACT through info@act-africa.org

The 8th World Congress on Conservation Agriculture (8WCCA), 29 June to 2 July 2020- Switzerland

8th World Congress on Conservation Agriculture
Bern, Switzerland
June 29th-July 2nd, 2020

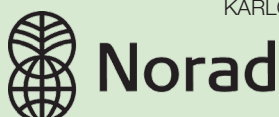


Congress on Conservation Agriculture (8WCCA) is jointly organized by the European Conservation Agriculture Federation (ECAAF), and its member in Switzerland, Swiss No-till (SNT), with the support of the Food and Agriculture Organization of the United Nations (FAO) and the African Conservation Tillage Network (ACT). It will be held in Bern, Switzerland, from 29 June to 2 July 2020.

The theme of the Congress is: **The Future of Farming: Profitable and Sustainable Farming with Conservation Agriculture**

Find out more on this link [8WCCA](#)

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For more information, please contact: **Executive Secretary | African Conservation Tillage Network**
KARLO - Kabete, Waiyaki Way | P.O. Box 10375-00100, Nairobi, Kenya | Tel: +254 20 8076064; +254 774 895 077
Email: info@act-africa.org | Web: www.act-africa.org

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