AFRICAN CONSERVATION TILLAGE NETWORK
Partnering for Economic Growth, Improved Food Security and a Better Environment

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Updates & News Alert

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Editor's view: Introducing the March 2019 CA News Alert

Poverty, food security and climate change are amongst the priority challenges currently facing Africa. The number of people living in poverty in Africa increased from 276 million in 1990s to around 390 million in 2013. The Horn of Africa region is suffering from a severe drought which has caused crops to fail and death of livestock. On top of this crisis, the region has now been hit by the worst flooding in 30 years causing acute food and water shortages for millions of inhabitants. Sustainability of this African society is hinged on the future of agriculture. Transforming Africa's agriculture to be more competitive, productive and sustainable is thus indispensable and a matter of urgency.

Another equally important dimension is addressing the paradox, that Africa's population as a whole is very young and the youngest continent in the world, with 60% of the entire continent aged below 25, yet the average age of the African farmer is 60 years. Majority of the Africa's youth see agriculture as not being "cool" or attractive. Most think of it only as a back-breaking, labour intensive and risky activity without economic pay-off and little room for career advancement. Farming needs therefore to also be transformed so that it offers interesting and admirable employment opportunities for Africa's youths.

Sustainable agricultural mechanization at all three farm power levels (improved hand tools, draught animal and engine power) and along entire value chains makes farming less arduous, efficient and admirable to the youths.

Engine powered seeder

The benefits of saved labour and drudgery from human muscle tillage-based farming are invested in income generating activities and social services. Mechanizing smallholder and medium scale farming does also open many new business opportunities for youths including the mechanization services provision, dealership, and after-sale-services including those offered under information communication technologies (ICTs).

Secondly, we argue that Africa's semi-arids can be converted into productive, resilient and sustainable grain baskets without irrigation using Conservation Agriculture (CA). CA makes farming smart in many ways including: stopping erosion and reversing degradation; increase in soil organic matter (0.1 - 0.2% per year); more available water in soils (1% organic matter = 150 m3/ha); less fertilizer use (-50%); and less machinery, energy & labour cost (50-70%). Comparatively modest investments are needed to develop the CA capacity of farmers and service providers, supportive infrastructure including CA equipment, and risk sharing in the transition from conventional to full CA period. It is essential that farmers, and cash chasing youths in particular, are able to produce a surplus produce profitably, hence empowering them to penetrate markets and become commercial. Productivity and reduced risk of farming (resilience and sustainability) inherent in CA are essential drivers to entice investments from the private sector.

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Thirdly, adoption of CA comes along with benefits of saved labour, timeliness of operations, production of surplus produce and improved soil moisture. These are all opportunities for innovating in farm/off-farm enterprises and even diversification to support new income generating enterprises or crop-livestock interactions. Farmers adopting CA have traditionally utilised residual moisture to produce a second or third crop and produce more over time on the same piece of land. Sometimes the extra (2nd or 3rd) crop can be a forage which could than support livestock, or the surplus is processed into livestock feed (e.g. poultry or dairy meal). Linking crop production to livestock has many complimentary benefits including year-round efficient utilization of labour, provision of manure for the crops and feeds for the livestock.

In recent years, the adoption of CA has revealed to be a sustainable way to intensify crop production and sustain rural livelihoods in several African countries. It aims at higher crop yields and lower production costs, thus making the production system more profitable and sustainable. All actors involved in agricultural value chain system - growers, food processors, distributors, retailers, consumers, and waste managers - have imperative roles to play in adaptation and adoption of this sustainable agricultural system.

The need to involve young population in the continent is critical to enhance adoption of sustainable agriculture technologies and foster innovations, if we are to sustainably increase agricultural productivity, and ultimately feed the growing population while protecting the environment. The new paradigm of CA must strive to reverse the negative image of agriculture. CA with sustainable agricultural mechanization provides an opportunity to reserve this trend and have more youths into agriculture through CA mechanized service provision models, information and communications technologies.

ACT acknowledges the various sources, authors, reporters, organizations and practitioners whose articles appear in this March, 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. Use the #conservationagriculture, #africamechanize to share links on articles, journals, news on CA and tag us on twitter @ACTillage

ACT's stake on Kenya's Food security debate: Strategies on addressing Food Security in Kenya using Conservation Agriculture

Agriculture is the engine of economic growth in Kenya, and a valuable source of income for the majority of Kenyans. About 75 percent of Kenyans derive all or part of their livelihoods from the sector, and it accounts for 18 percent of the gross domestic product (GDP). However, agricultural productivity has gradually stagnated in recent years, despite continuous population growth. Recurrent crises such as drought in Kenya's arid and semi-arid areas have exacerbated the vulnerability of basic livelihoods. This has posed critical challenges to food security as over two million people receive food aid annually. ACT is promoting Conservation Agriculture based technologies that are focused on increasing agricultural productivity and incomes for smallholder farmers; building more resilient communities; diversification of smallholder enterprises to exploit crop-livestock integration opportunities; and increasing access to affordable mechanization services for farmers, entrepreneurs and businesses.

Business Insight: Saidi Mkomwa shares strategies to food security

Business Insight: Food Security Guest: Saidi Mkomwa, Executive Director …

During the interview with KBC on 21 March 2019, the ACT CEO highlighted that, it is possible for Kenya to turn the semi-arids of Kenya into grain baskets with Conservation Agriculture and without irrigation at very affordable costs. That the damage and severity of droughts, floods or hunger can be reduced if we changed the tillage-based farming to no-till systems. That Kenya has CA model smallholder and large –scale farmers who have managed to double crop yields while simultaneously halving the production costs. Investments need to be made by the government to support mainstreaming of CA by parastatals and the private sector.

You can Watch the insight on the link KBC Business Insight: Food Security

The 3rd Africa Climate Smart Agriculture Alliance Annual Forum

The 2014 Malabo Declaration with its Commitment 6 calls for AU members' states to enhance Resilience of Livelihoods and Production Systems to Climate Variability and other related risks. To this end, AU member states are expected to ensure that at least 30% of farm, pastoral and fisher households are resilient to climate and weather related risks. At Malabo, African leaders and member states also adopted the Africa Climate Smart Agriculture Vision 25x25 which aims to support at least 25 million farm households in practicing CSA by 2025. This African Union Decision also endorsed the NEPAD Programme on Climate Change and Agriculture with its components on gender empowerment and support to smallholder farmers. The African Climate Smart Agriculture Alliance Forum through which the NEPAD Agency collaborates with all stakeholders and partners towards the attainment of Vision 25x25 was established. The NEPAD climate change and agriculture programme elaborates three interrelated core action segments, namely: *The Africa CSA Alliance Forum; Country Actions and Programme interventions and support services*.

With CSA providing an alternative pathway by addressing these multiple and intertwined challenges, the NEPAD Agency established the Africa CSA Alliance Forum in 2015. The overall aim of the Africa CSA Alliance is to bring together AU member countries, RECs, representatives from the private sector, civil society and other relevant stakeholders to share experiences, to identify interests and opportunities for activities related to agriculture within the climate change discourse and to foster dialogue amongst the African CSA community. Following the success of two Africa CSA Alliance Forums in 2015 and 2016, the NEPAD Agency in conjunction with the African Union Commission and with support from GIZ and NORAD convened the 3rd Africa Climate Smart Agriculture Alliance Forum from **27-28 March, 2019** in Dakar, Senegal. The theme for the Forum was "***Towards Vision 25x25 – Taking stock of CSA in Africa***". The g**eneral Objective of this f**orum was to facilitate dialogue and sharing of experiences and good practices on CSA in Africa.

During this forum, Africa Conservation Tillage Network (ACT) participated and was represented by the CEO, Eng. Saidi Mkomwa who was among the discussant in the Panel discussion focused on the question '*Are we making headway in implementing CSA: What is the progress towards vision 25x25?* Eng. Mkomwa's contributions confirmed by providing statistical data, that Africa is making progress towards achieving Vision 25x25. However, at the current pace, Africa will not be able to achieve the targets. He highlighted that there are immense opportunities to do better and more should be done.

He highlighted ACT's contributions to CSA through Conservation Agriculture, which delivers on all three goals of CSA namely adaptation/food security, resilience, and mitigation to climate change. That CA is now practiced on 1.5 million hectares, up by 210% in the past 10 years, increasing at the rate of 100,000 ha per year and practiced by 500,000 people, 98% of whom are smallholders. However, less than 2% of the cropped area is under CA, which presents huge opportunities for advancement. ACT as the continental CA network fosters synergistic partnerships with private and public institutions to collate and share needed CA knowledge and information using websites (www.act-africa.org; https://facasi.act-africa.org/; http://africamechanize.act-africa.org/), monthly news alerts (https://goo.gl/R5kxMj), and various publications including the first and second Africa congresses on Conservation Agriculture https://africacacongress.org/. Towards building capacity and resilient African institutions, ACT is developing CA capacity of national agricultural research institutions and universities by developing CA curricular and training materials for tertiary agricultural institutions. This is done with technical support of the international advisory panel on Conservation Agriculture

(https://icaap.act-africa.org/) and funding from NORAD.

In another session and responding to the question "Can CSA offer compelling employment opportunities for Africa's youths?", Eng. Mkomwa made a presentation titled "*Mechanized Conservation Agriculture Offers Irresistibly Interesting and Admirable CSA Employment Opportunities for Africa's Youths*". His presentation highlighted the opportunities presented by CA-based Sustainable Agricultural Mechanization and how it induces needed resilience. Besides, Mkomwa elaborated ACT network's niche and how the organization is operationalizing the SAM framework as well as ACT's contributions towards Agenda 2063, the Africa We Want. His PowerPoint presentation is available on the link ACT-3rd CSA alliance forum.

More information on the 3rd CSA Alliance forum are available on link Read more

ACT's Conservation Agriculture Centre of Excellence, Gwebi Agricultural College in Zimbabwe, has called on Guruve communal farmers to embrace Conservation Agriculture

GWEBI Agricultural College has called on Guruve communal farmers to embrace Conservation Agriculture as part of good agronomic practices as well as a measure against drought effects, thereby increasing yield and food security.

Speaking during a recent field training workshop in Guruve, Gwebi lecturer Dr. Jeffrey Jinya said Government was concerned with the hefty grain importation bill, hence Conservation Agriculture was a complementary effort towards attainment of Vision 2030. "We have a task from Government to work with farmers to reduce the grain importation bill due to low yields.

"This is as a result of poor farming methods and we are urging farmers to embrace Conservation Agriculture which has three main thrusts. "There is need to preserve the soil structure by avoiding ploughing year in, year out. Rises in temperatures are causing loss of moisture, hence there is need for mulching and inter-cropping with cowpeas to conserve the moisture and soil structure as well, especially in times of drought," he said. Due to the labour-intensive nature of manual Conservation Agriculture, Mr Jinya said they would provide the necessary machinery which will be available for farmers at an affordable price.

"We are bringing the machinery necessary for this programme to work and it will be available for every farmer at an affordable rate. This will scrap the need for large quantities of fuel by farmers and one of the principles of this project is timeliness of farming, which means adequate land preparation," said Mr Jinya. Read More

New Conservation Agriculture-based Sustainable Intensification (CASI) technology set to benefit farmers

The government of Tanzania has launched a newly researched technology; Conservation Agriculture-based Sustainable Intensification (CASI) and has ordered modalities be put in place so that it is streamlined all over the country. The technology that involves promoting practices that emphasize minimum tillage, crop rotation and intercrops and maintaining soil cover using crop residues and which was brought along by Tanzania Agricultural Research Institute (TARI), was officially launched here by the Deputy Minister for Agriculture, Mr Innocent Bashungwa on Wednesday.

The technology comes aboard after years of research that was supported by the Australian government under the Australia Centre for International Agricultural Research, and geared towards answering the question of why there is danger of food insecurity while productive agricultural technologies are available.

Minister Bashungwa directed TARI, Agricultural Seed Agency (ASA) and his ministry's Crop Development Division to forthwith embark on strategizing ways to roll out the technology from few growers who were involved as a pilot project so that all small farmers in the country can embrace it as soon as practicable.

"CASI technology is officially launched, and from now on it should be used countrywide," said Mr Bashungwa, adding that the government was sure it will bring huge changes in the agricultural sector because even if farmers use the same pieces of land, they will be sure of doubling their yields, but with shorter time and work because the technology makes use of simple machines such as power tiller. Read More

My secret to making fortune from dryland: A story of transformation

The road to Marimanti in Tharaka-Nithi County is rough, with drivers having to cautiously navigate through boulders and tree roots, some standing in the middle of the way.
As one battles with the bad roads, they also have to content with high temperatures currently soaring to 400C. Acacia, baobab and Calotropis procera fruits are the main plants flourishing in many parts of the semi-arid region.

However, despite being dry, the region is rich, playing hosts to over 200 farmers growing mainly sorghum and green grams and making a fortune out of it.

Peter Mutegi, 41, a farmer in Giakuri village, Nkondi ward, is among those who have managed to beat the dry weather to earn big from the soil by growing sorghum, millet and green grams. “I farm on 232 acres where I grow the crops for East African Breweries Ltd and Kenya Agricultural and Livestock Research Organization respectively,” he says.

Nine years ago, Mutegi owned a two-acre piece of land, which was an inheritance from his father where he struggled to grow maize and get market for his produce. His life, however, turned around in 2013 after being trained by an NGO on various agronomic practices that can work in the area that receives unreliable rainfall. “I was trained on Conservation Agriculture and I was among the first few farmers to be contracted by

East African Breweries Limited in 2013 to grow sorghum,” he says.

Luck struck again in 2015 when Mutegi got a contract from KALRO to become a green grams seed producer, investing Sh65,000. He was supplied with improved seeds by KALRO — Embu and trained on how to multiply seeds while following the recommended agricultural practices. Today, his farm is a lush green spectacle in the dry land, as it hosts sorghum occupying 45 acres, green grams 11, millet 120 and maize the rest, all that he farms under Conservation Agriculture. “I was trained on how to use conservation farming methods that increase water retention while inhibiting any weed growth,” Mutegi, whose farm is fully mechanized, explains. Read More

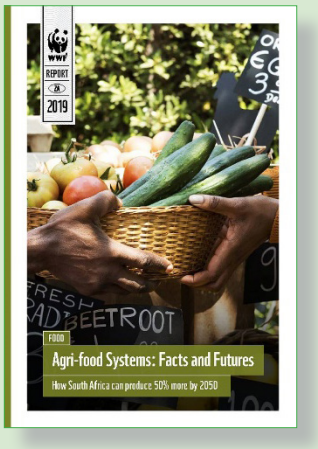
How to Produce More While Safeguarding Ecosystems?

West and Central African governments face sizable challenges to not only grow enough food to feed its swelling population but to also do so in a way that prevents harm to the environment.

With other regions of the world experiencing increase food production while conserving the ecosystem, experts in West Africa are starting to mull over trying farming models that tackle the adverse effects of climate change to smallholder farmers and natural resource degradation. This model of farming is called Conservation Agriculture. Not only does it maintain permanent soil cover it also ensures minimum soil disturbance.

Between Wednesday, March 20 to Thursday, March 21, lead researchers of national agriculture systems of 15 countries, as well as experts from the Food and Agriculture Organization (FAO) and CORAF met in Dakar, Senegal to validate a research proposal to be submitted to donors for funding. The primary goal of the project will be to achieve the twin goals of boosting food production while safeguarding the environment. Read More

Agri-food Systems: Facts and Futures... How South Africa can produce 50% more by 2050



How SA can produce 50% more by 2050. Our food system has done more damage to the natural environment than any other human enterprise. The way in which we currently produce food threatens both the environment and human health. We need to ensure a resilient and regenerative food system, a healthy environment and access for all to nutritious food.

Until a few years ago, WWF focused on sustainable farming and the impacts of agricultural production. But farms alone will not bring about the necessary transformation in our food system. Collaborative solutions – by multiple actors – are called for to ensure a low-carbon equitable and sustainable food future.

WWF outlines five practical and sustainable approaches – aligned with the Sustainable Development Goals and staying under 1.5 degrees of warming – to shift South Africa's food system and produce 50% more food for a growing population by 2050. Learn More or get the whole report on WWF 2019 Report

Conservation agriculture the way to go in Namibia

CONVENTIONAL tillage mostly used by communal farmers, is contributing to increased vulnerability to climate change, says the coordinator of a Namibian climate change adaptation project. Aron Hangula, the coordinator for 'Scaling up Community Resilience to Climate Vulnerability and Change' (SCORE) said there is need for the implementation of Conservation Agriculture to achieve food security in the country.

Hangula, the coordinator for projects in Ohangwena and Oshikoto region, said this at a one-day Oshana regional environmental education conference for schools held at the Charles Anderson Combined School at Ongwediva last Tuesday. The project assists communal farmers in northern Namibia to implement Conservation Agriculture, as a response to climate change and declining land productivity.

He said, Conservation Agriculture is an approach to manage agro-ecosystems for improved and sustained productivity and food security while preserving the environment. "It is founded on the need to improve soil conservation and reduce soil erosion and associated degradation in cropping systems while at the same time conserving resources and maintaining or enhancing crop yields," said Hangula.

He said Conservation Agriculture is based on three interlinked principles, which are avoiding or minimising mechanical soil disturbance by planting crops in untilled soil, enhancing and maintaining a permanent cover on the soil surface and the diversification of species by using crop rotation including growing legumes. Read More

Kenya Agricultural and Livestock Research Organisation (KALRO) advises farmers to embrace Conservation Agriculture

Farmers have been advised to embrace Conservation Agriculture which includes minimum disturbance of the soil, inter-cropping and retaining crop residue in the farm to boost production. Experts from KALRO have been testing Conservation Agriculture technologies through Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) for the last eight years. KALRO assistant director Dr Anthony Esilaba said Conservation Agriculture practices were found to reduce land degradation and labour costs, improve soil fertility, and increase farmers' capacity to adapt to climate change. Find out More.

Strengthening the Agroecology Movement in Ghana

Naturally boosting food crop yield through Agroecology

Peasant Farmers Association of Ghana (PFAG) is advocating the adoption of the agroecology farming concept to help maintain soil fertility and boost food production in the Ghana.

As a part of our regional program in West Africa, Groundswell is collaborating closely with our Ghanaian partner organization CIKOD, as well as allies like the Peasant Farmers Association of Ghana (PFAG), on a multi-pronged strategy to strengthen the agroecology movement in Ghana to create more productive, healthy and sustainable farming and food systems from the ground up. Key elements of the strategy include: ***Farmer-to-farmer agroecological innovation*** -test and spread effective strategies to regenerate land and soil fertility, improve and diversify production and family wellbeing, and build resilience to climate change; ***Shifting government investments*** - encourage the most effective use of government budgets to support and incentivize appropriate agroecological farming, as opposed to misallocated subsidies to chemical fertilizers and inputs. (Report on Agricultural Subsidies in Ghana); ***Strengthening the farmer's movement -*** work with CIKOD and PFAG and other civil society organizations to strengthen local as well as a national agroecology movement in Ghana that can support farmer-centered agroecological innovation, spread it, and work for enabling policies; and ***Strengthening local markets*** -launch pilot program to strengthen local markets in order to agroecological production, build rural economies, and provide healthy food to local populations

Real change comes from giving farmers the opportunity to succeed by investing in their capacities to organize, improve their farms, and spread real solutions across thousands of families. Learn how you can make a difference, Read More and watch the video on link Agro-ecological March.

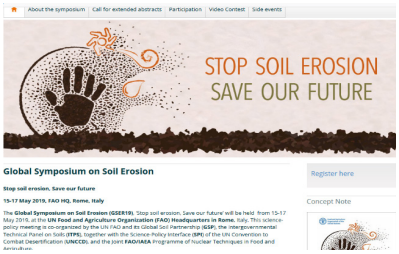
2019 Events and Opportunities

International Conference on Conservation Agriculture & Soil Tillage, April 22-23, 2019 in Sweden

Conservation Tillage 2019 is delighted to welcome the participants from all over the globe to attend the "**International Conference on Conservation Agriculture & Soil Tillage**" scheduled during **April 22-23**, **2019** in **Gothenburg, Sweden**. The conference provides a global arena for researchers and international scholars to present their findings. **Conservation Tillage 2019** is providing an opportunity for the agriculture industry to learn about current and upcoming issues, explore new developments and interact with others vested in the same cause. The theme of the conference is 'Exploring new methods towards sustainable agriculture'

This **International Conference** offers a great platform for eminent researchers, academia, the industry professionals, government officials and other professional bodies from across the globe to converge and discuss their ideas. More information is available on Read More

Global Symposium on soil Erosion



The **Global Symposium on Soil Erosion (GSER19)**, 'Stop soil erosion, Save our future' will be held from 15-17 May 2019, at the **UN Food and Agriculture Organization (FAO) Headquarters in Rome**, Italy. This science-policy meeting is co-organized by the UN FAO and its Global Soil Partnership (**GSP**), the Intergovernmental Technical Panel on Soils (**ITPS**), together with the Science-Policy Interface (**SPI**) of the UN Convention to Combat Desertification (**UNCCD**), and the Joint **FAO/IAEA** Programme of Nuclear Techniques in Food and Agriculture. The objective of GSER 19 is to establish a common platform to present and discuss the latest information on the status of interventions and innovations in the field of soil erosion and related land management**.**

The Symposium will be divided in three parts (i.e. (1) Soil erosion data, (2) Policies on soil erosion and (3) the economics of soil erosion). Call for abstracts is now open (deadline 10th March 2019).

Registration is also open (https://event-services.fao.org/events/global-symposium-on-soil-erosion/registration-228bb5e854f14a6183800d-dc23071e3c.aspx?fqp=true).

For more information, please visit our website: http://www.fao.org/about/meetings/soil-erosion-symposium/en/).

Southern African Confederation of Agricultural Unions (SACAU) Annual Conference

SACAU is organizing a conference as a prelude to its Annual General Meeting (AGM) that will be held from 27th to 28th of May 2019 in Maputo, Mozambique. The theme of this year's Conference is "Taking stock of Southern Africa's Climate Smart Agriculture (CSA) agenda: What are the prospects for the future?" The conference seeks to achieve the following key objectives:

- To provide an opportunity for farmer leaders in southern Africa to better understand the CSA concept, policy environment and public and private sector investments required to promote adoption of CSA practices and technology on a wide scale;
- To improve farmer leaders' understanding of the agriculture and climate change nexus and introduce them to farm-level interventions that can be implemented to reduce GHG emissions.
- To explore the relevance of land tenure and property rights in promoting the adoption of environmentally sustainable agriculture programmes.

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

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

The 8th World Congress on Conservation Agriculture (8WCCA) is jointly organized by the European Conservation Agriculture Federation (ECAF), 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

ACT programs, projects and initiatives are firmly anchored towards achieving the 2030 SDGs.

Goal 1:
End poverty in all its forms everywhere

Goal 2:
End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 5:
Achieve gender equality and empower all women and girls

Goal 13:
Take urgent action to combat climate change and its impacts

To read our past CA Newsletter Issue, Download our **CA News app** from **Google Play store** at:

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CA News app

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Norad

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