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

10
October 2018

Updates & News Alert

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Editor's view: Introducing the October, 2018 CA Alert

Conservation Agriculture (CA) seeks to increase productivity, strengthen farmers' resilience to climate change, and reduce agriculture's contribution to climate change by reducing greenhouse gas emissions and increasing carbon storage on farmland. The scientific evidence in the condensed papers' book of the Second Africa Congress on Conservation Agriculture *available at* CA-KH confirm that CA with its related interventions is a key component to identify Climate Smart Agriculture transformation strategies leading to enhanced agricultural production and food security and agricultural systems that are more resilient. Environmentally, CA strategies include practices that involve reduced or no tillage to reduce erosion and improve recharge into riverine systems; and use of mulching and cover crops to improve soil fertility, water infiltration, protect soil from exposure to the sun. Furthermore, crop diversity/rotation replenishes nitrogen through use of le-

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Message of Appreciation

ACT wish to take this opportunity to thank you partners, stakeholders and friends for your efforts towards making the Second Africa Congress on Conservation Agriculture held 9 – 12 October 2018, at Birchwood Hotel, Johannesburg, South Africa not only to happen but with immense success. With 501 participants from 52 countries, the event was indeed well attended and key deliberations achieved.

Your continued engagement and support within and across ACT in your various capacities is highly appreciated. The accomplishment by ACT, the Network, towards the 2ACCA would not have been possible without your support and desires to lift the millions of smallholder farmers in Africa out of poverty through sustainable farming practices.

The 2ACCA with the theme "Making Climate-Smart Agriculture Real in Africa with Conservation Agriculture: Supporting the Malabo Declaration and Agenda 2063" gave an opportunity for wider engagement, knowledge and information sharing on CA and related activities. Highlights from the event include:

- The ACCA is a process and actions of the 2ACCA need to directly build on outcomes of the 1ACCA https://tinyurl.com/ydg3rkwc
- The 2ACCA is inspired and should build on the momentum of the AU Agenda 2063 and the 2014 Malabo Declaration on Agriculture Transformation
- CA is a critical means to attainment of economic growth and inclusive development; of global efforts on climate, land and water, and of biodiversity conventions
- Recognizing that National and Local ownership in the efforts to advancing practicing of CA in Africa is an imperative
- That "knowledge" is one of the most important resources Africa has in accelerating uptake and spread of CA in the continent

Eng. Saidi Mkomwa
ACT Executive Secretary,

From page 1

gumes, improves soil structure and fertility, and prevents build-up of pathogens and pests. Economically, practicing CA results to higher productivity and reduces labour to the advantage of the farmer.

In order to effectively respond to this potential, the dominant smallholder farmers in Africa require an enabling policy environment; access to appropriate technological, weather and climate information; access to appropriate production inputs and fair output markets; and capacity to invest and manage risk.

It is against the above backdrop that the African Conservation Tillage Network (ACT) and the Government of South Africa, in collaboration with partners hosted the **Second Africa Congress on Conservation Agriculture (2ACCA)** from 9 to 12 October 2018 at Birchwood Hotel, Johannesburg, South Africa. The purpose of the 2ACCA initiative was to facilitate diverse and open sharing of experiences and information on CA thereby fostering learning and widespread awareness and interest in the uptake and spread of CA as an agro-ecosystem approach to sustainable farming and agricultural land use management across Africa.

The theme of the congress was "*Making Climate-Smart Agriculture Real in Africa with Conservation Agriculture*: *Supporting the Malabo Declaration and Agenda 2063*". The aim of the Congress was to share and expose experiences and lessons and facilitate alliances to unblock hindrances to expanded and scaled-up adoption of conservation agriculture especially among the smallholder farming systems and related industry in Africa.

The congress approach included peer reviewed scientific papers (presented orally and also through posters) and summarized into a condensed papers' book (*available at* CA-KH); keynote presentation sessions by internationally renowned persons; plenary panel discussions; five parallel thematic paper presentation sessions; CA field site visits; thematic side events; exhibitions; a special CA awards session; and launch of the CA Quality Assurance Framework and CA Curriculum Guide for Africa.

Besides, the Congress enlightened, invigorated and motivated participants to explore new ways of configuring and disseminating CA information to create new partnerships and discover new models of collaboration to promote transformational change in African Agriculture for the development of sustainable food and agriculture systems.

Indeed the purpose, aims and objectives of the Congress were largely achieved since critical issues were discussed at length and from many contexts and deliberations made. The 2ACCA Way Forward Actions shared by the International Steering Committee Chairperson at the closing ceremony are currently being reviewed and will be shared in the November 2018 alert.

Besides, ACT acknowledges the various sources, authors, reporters, organizations and practitioners whose articles appear in this October 2018 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.**

You can also share your views on what went well in the 2ACCA and what needs to be improved in the next Congress (3ACCA) through the email cacongress@act-africa.org

Apologies for any cross posting of some articles.

The Second Africa Congress on Conservation Agriculture (2ACCA)

CA is transforming the way farmers practice agriculture worldwide and has replaced conventional agriculture on more than 180 million hectares of cropland, corresponding to 12.5% of 'global arable' lands. Since 2008/09, the global rate of CA expansion has been 10.5 million hectares per year. During the past 10 years, CA area in Africa has more than doubled to about 1.5 million hectares, benefitting several million farming households. Increasing numbers of governments as well as public and private institutions in Africa are supporting climate-smart agricultural development based on CA systems.

In Africa, CA has benefitted from significant donor attention and the call to address multiple agricultural challenges, which include the pressure of expanding populations on land resources, declining soil fertility, low productivity, and the negative effects of climate variability. Research has proven the biophysical and economic benefits of CA for Africa, yet CA adoption and spatial expansion by African farmers is relatively low, compared to its acceptance in similar agro-ecologies in the Americas and Australia.

CA is considered as a tool to produce more and sustainably while ensuring soil health. It gives the opportunity to use different mechanization levels, from hand tools to animal power to motorized. CA can be practiced in diverse conditions, from the Sahel to humid tropics, from drought tolerant cereals such as pearl millet to maize and plantation and tree crops such as bananas and cocoa, leading to the promotion of agro-forestry in predominant forest ecosystem areas. Each context brings different challenges regarding the implementation of CA, and many technologies can be adapted, including traditional ones. Technical solutions should be innovated through close partnerships between farmers, private sector industries, extension services and researchers. This approach has already permitted the development and adaptation of CA for small and big farms, in various agro-ecological zones and socio-economic contexts, and for many farming systems.

It is in the above context, that ACT - being the premier organization in promotion of CA in Africa - brings together expert knowledge, information, and insights from practitioners from across different sectors and interests groups from the public, private and civil sectors under one roof to discuss and strategically agree on scaling-up CA as an integral part of the growing food and agriculture systems in Africa. For 2018, ACT in collaboration with the Government of South Africa, African Union Commission, the NEPAD Agency, Regional Economic Communities, International NGOs, Norwegian Agency for Development Cooperation (NORAD), European Union (EU), Food and Agriculture Organization (FAO) of the UN and various bilateral and multilateral partners organized the **Second African Congress on Conservation Agriculture** (2ACCA) held in Johannesburg, South Africa, from 9 to 12 October 2018 under the theme "Making Climate-Smart Agriculture Real in Africa with Conservation Agriculture: Supporting the Malabo Declaration and Agenda 2063". This was intended to concentrate the various stakeholders to identify the best solutions for all regions in Africa to support the Malabo Declaration and Agenda 2063. The 2ACCA, as the forum for the continental Conservation Agriculture Community to support the transfor-

mation of African agriculture, is organized and consolidated as one of the most important meetings on the continent dealing with agricultural change as desired by the Malabo Declaration and Agenda 2063

The Congress was attended by 501 delegates from 52 countries globally. Africa was represented by 37 countries, of which 4 were from North Africa, 9 from Eastern and Central Africa, 11 from Southern Africa and 9 from Western Africa. The categories of the delegates were government 19%, farmers and farmer organisations 12%, Research institutions and academia 29%, Non-Governmental organisations 24%, Private sector 11%, and Development Partners 5%. More information on the congress available on https://www.africacacongress.org/?com=88

2ACCA Conservation Agriculture Awards

The organizers of 2ACCA takes pride in greater performance, diversity, and innovation in the promotion and adoption of Conservation Agriculture in Africa. The 2ACCA honoured and recognized outstanding individuals or organizations dedicated to adaptation, promotion and adoption of best quality Conservation Agriculture in the continent through the highly regarded award scheme dubbed "**Conservation Agriculture (CA) Awards**". The CA Awards scheme was established as one of the key "permanent" endeavours to identify and appreciate the CA pioneers and champions who are engaged in transforming agriculture in Africa based on the concepts, principles and practices of Conservation Agriculture systems.

The International CA Awards Committee after thorough and objective evaluations presented the winners in different categories of the scheme. These winners were recognized and rewarded with trophies and certificates of recognition as champions at the congress. More information on the CA Awards are available on https://caawards.africacacongress.org/

Malabo Montpellier Panel Represented in the 2ACCA

MALABO MONTPELLIER PANEL

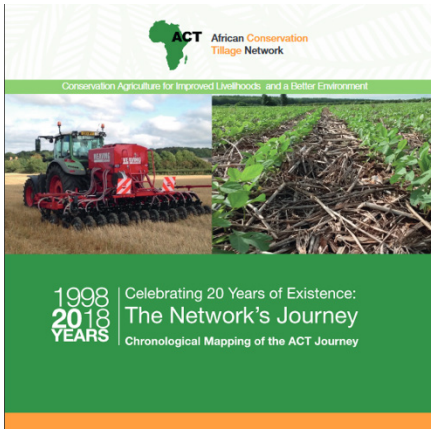
View this email in your browser

Dear friends and partners,

We are pleased to update you on our developments during the past month. In October, the Second Africa Congress on Conservation Agriculture (2ACCA) took place in Johannesburg. 2ACCA sought to facilitate knowledge and experience sharing on Conservation Agriculture, including its role in improving food security and nutrition outcomes through enhanced sustainable agricultural productivity. Patrick Caron and Debisi Araba were actively involved in this event where they presented our Mechanized report. Patrick Caron was also part of a high-level panel that rolled-out the African Union's Sustainable Agricultural Mechanization Strategy (SAM) for Africa.

Patrick Caron and Debisi Araba of the Malabo Montpellier Panel were actively involved in the 2ACCA event where they presented the Panel's Mechanized report. Patrick Caron was also part of a high-level panel that rolled-out the African Union's Sustainable Agricultural Mechanization Strategy (SAM) for Africa.

Celebrating 20 Years of Existence: Chronological mapping of the ACT Journey



During its first 20 years of existence, the impact of ACT Network's activities and influence on agricultural development in Africa has been significant and has contributed immensely to the advancement of sustainable agriculture, livelihoods of farmers and service providers, and national economies. Today ACT is an internationally acknowledged Pan-African institution, with a well-functioning Secretariat in Nairobi, and regional and country focus coordinating Conservation Agriculture Centres of Excellence in different countries in Africa. The existing potential for synergistic collaborations and knowledge sharing for agricultural transformation, in a diverse continent positions ACT as a value-adding partner, coordinating and linking stakeholders to each other, to knowledge and information across Africa and beyond. .

Although the great breakthrough for CA in Africa is yet to happen, the impact of the Network is visible across the continent and is recognized. Today CA is becoming generally accepted as a sustainable and regenerative, climate-smart production system, reversing soil erosion and restoring farmland on the brink of severe degradation, enhancing soil health, biodiversity and food safety, ecosystem management, increasing water and nutrient use efficiency, and improving yield stability and food security, reducing poverty and contributing to sustainable development in Africa. Read More

Making climate change mitigation and adaptability real in Africa with Conservation Agriculture

In this report, the authors have gathered essential information on how the agricultural sector can respond to climate change through Conservation Agriculture (CA). This document aims to serve as a basis for decision-making based on science and agricultural experimentation in Africa.

The need to eradicate hunger and food insecurity in this world, and particularly in Africa where it has been on the increase, and a sustainable intensification of agriculture, with a focus on soil and water conservation, is a crucial means to attainment of the solution. For many developing countries, the main concern regarding agriculture relates to food security, poverty alleviation, economic development and adaptation to the potential impacts of climate change.

Africa has been the lowest source of greenhouse gas emissions (GHG) in the world, however, is the most vulnerable continent to the impacts of climate change.

The report concludes that on average, the carbon sequestered for Africa due to CA adoption of 1.5 M ha is around 1 t C ha^{-1} yr^{-1}, corresponding to a total amount of 5.6 M t CO_2 yr^{-1}. This relatively high figure is because degraded soils are 'hungry' for carbon, as the degradation caused by years of tillage and crop biomass removal has resulted in a drastic reduction of soil's organic matter. The potential effect of the application of CA on carbon sequestration is to increase this by almost 100 fold to 533 M t of CO_2 per year. The national emissions of South Africa, the World's 13th largest CO_2 emitter will, by 2025 and 2030, be in a range between 398 and 614 M t CO_2 -eq per year. Thus, concludes the report, CA is more than a promising sustainable agricultural system, as it can effectively contribute to mitigating global warming, being able to offset agricultural CO_2 emission. Read More

Agri-tech can turn African Savannah into global food basket – African Development Bank

The African Development Bank is championing a new regional and global effort to transform the African Savannah from a "Sleeping Giant" to the cradle of the continent's green revolution.

"This sleeping giant needs to wake up," the Bank's Vice-President for Agriculture, Human and Social Development, Jennifer Blanke, told an audience at a 2018 World Food Prize side event in Des Moines, Iowa last week. Blanke described Africa's nearly 400 million hectares of Savannah zones as "the world's largest agricultural frontier," and if a small fraction of that cultivatable land – some 16 million hectares - is transformed, it could well set Africa up to decrease dependence on food imports, feed itself and contribute to feeding the world.

Africa is host to 60% of the world's uncultivated arable land, but currently spends an estimated US$35 billion per year on importing food. This figure is projected to shoot up to US$110 billion by 2025. Africa is importing what it should actually be producing: 22 million metric tons of maize, two million metric tons of soybean, one million metric tons of broiler meat and 10 million metric tons of milk product each year. This situation is made worse when African countries export raw goods outside the continent to be processed into consumer products imported back into Africa for purchase. In essence, Africa is exporting jobs outside the continent, and contributing to Africa's poverty challenges.

The African Development Bank has determined that the African Savannah can support the production of maize, soybean, and livestock, and transform the continent into a net exporter of these commodities. Only ten percent of the African Savannah is under cultivation – better utilized, small sections of Africa's grasslands could provide direct jobs for tens of millions of young people and indirect jobs for many more.

Blanke, who spoke on behalf of African Development Bank President Akinwumi Adesina, noted that all of Africa's Savannah is more than twice as large as Brazil's "Cerrados" that launched that country's farming economy success. She said transforming a small part of Africa's mixed woodland grasslands, in a smart and sustainable way, can produce enough to supply all the continent's maize, soybean, and livestock requirements.

Brazil transformed its tropical Cerrados into a US$54 billion food industry within two decades through skilful development of production technologies for new crop and livestock varieties; innovative soil and crop management programs adapted to the tropics; wide-scale dissemination of new agricultural technologies; low interest loans, and ambitious rural development programs. Read More

Rethinking crop residue for the environment, livelihoods and peace

Crop residues contain valuable nutrients and micronutrients that can be recycled to improve the organic matter and fertility of the soil, enhance plant growth, and build top soil. As crop residues decompose, they serve as a binding agent to hold soil together, thus reducing erosion and compaction. By ensuring a minimum of 30% coverage with crop residue (and/or cover crops), farmers benefit from weed suppression, evaporation, increased water infiltration and retention. At the same time, fertiliser use can be halved, and the need for pesticides falls significantly. Local biodiversity also thrives upon healthy soils.

In addition, decomposing crop residue captures carbon from the air and returns it to the soil where it can be used more effectively. Scientists estimate that by increasing soil carbon by just 0.4% per year, or 4 parts per 1000, the equivalent of 20-35% of annual global anthropogenic emissions can be sequestered, thus providing a powerful tool to stabilise the climate. Smallholder farmers have been urged to consider conservation farming this season as most of them have lost their draught power to tick-borne diseases. Most smallholder farmers do not have access to machinery such as tractors and rely on their oxen for tillage.

Zimbabwe Commercial Farmers' Union president and Federation of Farmers' Unions representative Mr Wonder Chabikwa last week confirmed that most smallholder farmers had their cattle decimated by tick-borne diseases and that they would face difficulties in their land preparations.

"Our smallholder farmers are very significant contributors to Zimbabwean farming and rely on cattle draught power to a large extent," he said. "Regrettable and avoidable loss of this sector's cattle will in no doubt negatively affect their tillage operations. "Cattle died due to tick-borne diseases. Though we expect all sectors of our farmers to modernise and use machinery in place of cattle (as draught power) we still have some way to go. Farmers should also adopt conservation agriculture that includes minimum tillage, pot holing and mulching that conserve moisture for crop development."

Mr Chabikwa said conservation agriculture was a cheaper way of preparing land and had several advantages. "Conservation farming and zero tillage are very beneficial for moisture conservation and cheaper as emphasised by Agritex," he said. Read More

Mechanisation Cited as Key to Africa's Agricultural Turnaround

Mechanisation has been cited as one of the priority areas in the improvement of Africa's agricultural and overall economic well-being. Experts attending the African Green Revolution Forum (AGRF) in Kigali, Rwanda, unanimously agree that mechanisation holds the greatest potential in increasing productivity, whilst making agriculture attractive to the millions of unemployed youth in the continent.

Rwanda is already taking major steps towards a completely mechanised future, with the government hoping to double its mechanised farm operations in the next two years. "By 2020, we plan to have farmer operations 50 percent mechanised. So far, we have 3500 ha on which 25 percent of farm operations have been mechanised from cultivation to harvest, post-harvest and processing," said Fulgence Nsengiyumva, Rwanda's Minister for Agriculture and Animal Resources, Republic of Rwanda.

It is such efforts that have seen the East Africa country reduce rural poverty by 25 per cent in the past 25 years, while winning numerous accolades in agricultural innovation. Read More

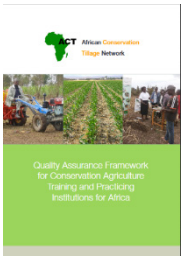
Farmers urged to embrace modern practices in Malawi

Smallholder farmers in Karonga have been urged to embrace modern agricultural practices to increase their yield and boost food production amid unpredictable rainfall patterns due to effects of climate change. Malawians rely on maize crop for food.

Karonga Agriculture Development Division (ADD) chief agriculture extension officer, Francis Chilenga, made the call over the weekend during an agriculture fair that the Karonga ADD organised. According to Chilenga, in the face of high costs of imports and erratic rainfall patterns it is time that farmers should start embracing good agricultural practices to offset effects of the changing environment. He noted that low use of new farming technologies and reliance on rainfed agriculture are some of the challenges contributing to low agriculture production hence conservation agriculture is one of the ways to counter effects of climate change. Read More

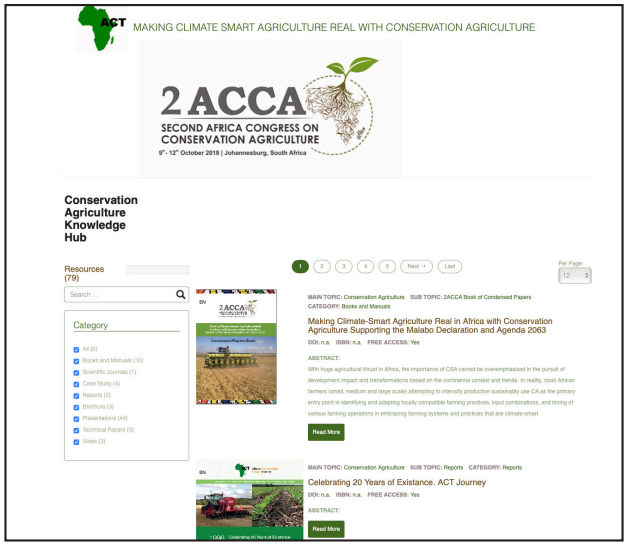
Other information materials and resources

Quality Assurance Framework for Conservation Agriculture Training and Practicing Institutions for Africa



The purpose of the CA quality assurance framework is to assist African countries including their accredited training and practicing institutions that are promoting CA best practices (NGOs, Private sector, Companies, Projects, National and local governments, and CA Centres of Excellence) to promote and monitor the improvement of their systems of CA education and training and programme delivery. This tool can be used as a systematic approach to modernising education systems by improving the effectiveness of CA programmes and projects. Read More

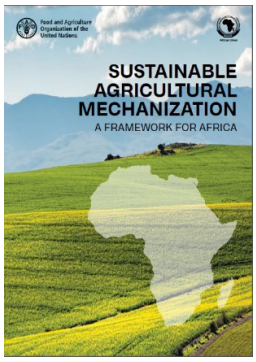
2ACCA Presentations and Resources



Conservation Agriculture - Knowledge Hub

CA-KH provides a collection of all the presentations and other resources submitted during the 2ACCA congress. The hub will be continually populated with the new developed and synthesis materials relating to the 2ACCA and other past congresses. Be checking on it.

Sustainable Agricultural Mechanization; a framework for Africa

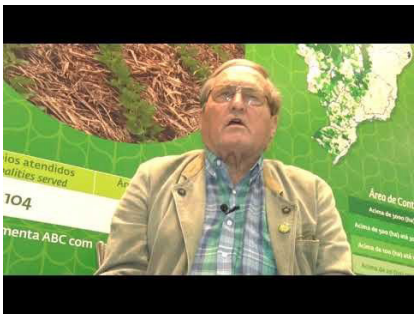


This publication, Sustainable Agricultural Mechanization: A Framework for Africa, is a result of continuous and thorough discussions among high-level policymakers and experts of the AU Member States, the AUC, FAO and other partners in the fields of food and agriculture. It aims to inform policymakers and decision makers in the Member States and the Regional Economic Communities (RECs) in Africa, and the wider development community dealing with agricultural development, on the significance of mainstreaming sustainable agricultural mechanization in the overall national and regional agricultural development programmes. Learn More

Making Climate-Smart Agriculture Real in Africa with Conservation Agriculture: Supporting the Malabo Declaration and Agenda 2063: Book of Condensed Papers

With huge agricultural thrust in Africa, the importance of CSA cannot be overemphasized in the pursuit of development impact and transformations based on the continental context and trends. In reality, most African farmers (small, medium and large scale) attempting to intensify production sustainably use CA as the primary entry point in identifying and adapting locally compatible farming practices, input combinations, and timing of various farming operations in embracing farming systems and practices that are climate-smart. The Book of condensed papers to brings together in a condensed publication different expert knowledge, information, experiences and insights from practitioners from across different sectors and interests groups from the public, private and civil sectors as regard to CSA and CA. Read More

No-Till System is the Hope and Future of African Agriculture



Strong message to Africa from Brazil. Conservation Agriculture lessons from Brazil by Herbert Bartz

The video message is available on: https://youtu.be/5cH6P1YQnXI

2018 Events

Scaling workshop for the project: Use of Conservation Agriculture for Crop-livestock Systems (CLCA) - November 20-22, 2018, Hammamet, Tunisia.

The international workshop on "Scaling" for the CLCA project convened by ICARDA, IFAD and CIMMYT will take place on **November 20-22, 2018**, at Hammamet, Tunisia. Scientists, experts and implementation partners from Tunisia, Algeria, Bolivia and Honduras will meet to develop capacities and share knowledge on how to implement better their projects with a scaling approach in order to have a sustainable impact.

The objectives of the workshop are:

- Come to a common understanding of what scaling is.
- Define a realistic scaling ambition.
- Identify opportunities and bottlenecks for scaling.
- Identify key elements to develop a scaling strategy per country.

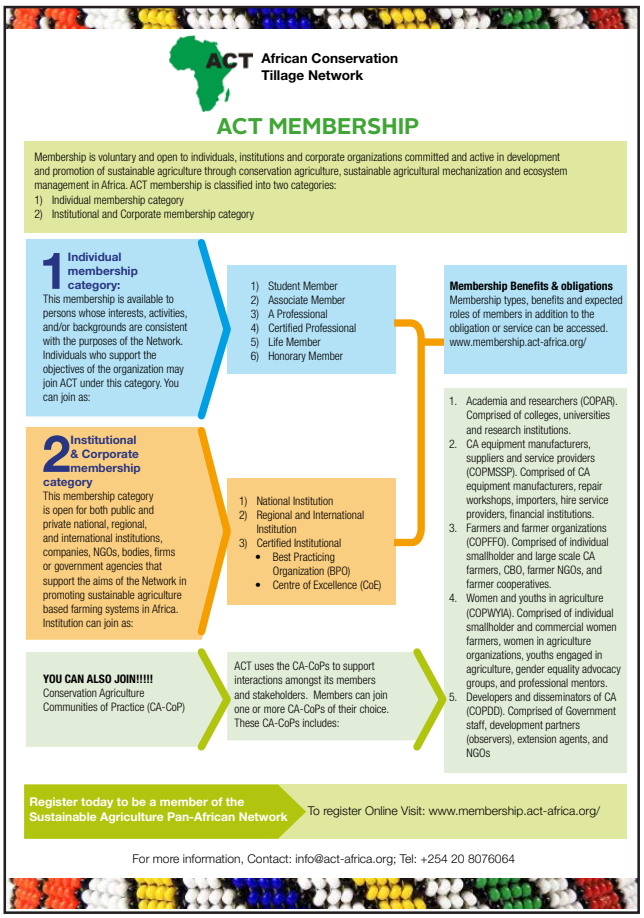
The workshop methodology builds upon the SCALING SCAN tool;
for more information on this tool please visit the link Read more

ACT Membership Campaign Drive

Membership is voluntary and open to individuals, institutions and corporate organizations committed and active in development and promotion of sustainable agriculture through Conservation Agriculture, Sustainable Agricultural Mechanization and Ecosystem Management in Africa. ACT membership is classified into two categories:

1) Individual membership category
2) Institutional and Corporate membership category

More information on the membership and how to become a member of the Network is available on http://membership.act-africa.org/ or register to be a member today online on http://membership.act-africa.org/membershipregistration/



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

SUSTAINABLE DEVELOPMENT GOALS

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

Google Play **CA News app**

Goal1: 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

For more information, please contact: Executive Secretary | African Conservation Tillage Network
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Norad

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