



Updates & News Alert

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Editor's view: The January, 2018 CA Alert is about the 2ACCA



The New Year, 2018 is another BIG milestone for ACT as it networks partners and stakeholders for the Second Africa Congress on Conservation Agriculture (2ACCA). ACT is collaborating 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 to organise and host the 2ACCA in **Johannesburg, South Africa**, from **9th to 12th October 2018**. The theme of the Congress is "Making Climate-Smart Agriculture Real in Africa with Conservation Agriculture: Supporting the Malabo Declaration and Agenda 2063".

For registration and more information about the 2ACCA, go to the congress website www.africacacongress.org or write to us at info@africacacongress.org.

The January 2018 news alert does also feature CA publications and other upcoming events. ACT acknowledges the various sources, authors, reporters, organizations and practitioners whose articles appear in this January 2018 issue. 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](https://twitter.com/ACTillage).

Apologies for any cross posting of some articles.

We at ACT wish you a Happy New Year, 2018. We look forward to continuing our work with farmers, partners and funders and are excited about the innovative approaches and technologies in development of sustainable agriculture and ecosystem management. No-till Conservation Agriculture (CA), sustainable agricultural mechanization, and agroecology are key thrusts of the Network in achieving this vision.

ACT is engaging with Regional organizations for operationalization of policy instruments promoting climate smart agriculture (CSA), including the Lusaka CA/AU's Malabo Declaration CSA Vision 25x25 (to reach 25 million farm households by 2025). At the National level, ACT strengthens systemic capacity building to infuse CA into training curriculums and the research agenda, using CA Centres of Excellence. Stakeholders at the Grassroots receive increased awareness, are formally linked to produce markets and production inputs/services including those of entrepreneurial mechanized CA service providers.

A flashback on 2017 reminds us of important sustainable agriculture events and transformations. These include:

- Lessons from the Farm Mechanization and Conservation Agriculture for Sustainable Intensification (FACASI) project, phase 1.

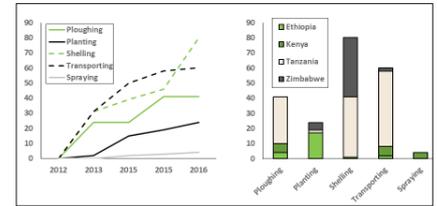
- Development of the TRANSFORMING AFRICA'S AGRICULTURE: Accelerating the Uptake and Spread of Conservation Agriculture in Africa investment programme.
- Development of the Framework for Sustainable Agricultural Mechanization in Africa,
- Weaving Machinery and ACT are pilot testing a no-till seed drill prototype to assess its suitability for medium and smallholder farmers in Africa,
- The seventh world congress on Conservation Agriculture (7WCCA) in Rosario Argentina,
- Regional meeting of Norwegian climate smart agriculture partners in Lusaka.
- Africa holds the key for feeding the nine billion people that will inhabit this planet by 2050, says Dr. Akinwumi Adesina, President of the African Development Bank and 2017 World Food Prize Laureate, during his Norman Borlaug Lecture,
- Namibia targets 50% crop farmers practicing CA by 2022,
- CA curriculum and manual development for tertiary agricultural and natural resources education institutions in Africa.

Highlights for 2017

First phase of FACASI widens opportunities for smallholder farm mechanization



The first phase of the ACIAR funded, CIMMYT implemented Farm Mechanization and Conservation Agriculture for Sustainable Intensification (FACASI) <http://facasi.act-africa.org/> project ended in February 2017. The end of project workshop held in Nanyuki Kenya in February 2017, shared Eastern and Southern Africa Country experiences and concluded that two wheel tractor based technologies save time and cost, enhance yields, widens opportunities for smallholder farmers to mechanize, has attracted a growing number of service providers and reached hundreds of beneficiaries.



Growing number of SPs as a result of FACASI

Read more [FACASI Knowledge Management Report](#) or [Highlights from 4 years of FACASI implementation](#)

Transforming Africa's Agriculture

The **TRANSFORMING AFRICA'S AGRICULTURE: Accelerating the Uptake and Spread of Conservation Agriculture in Africa investment programme** was developed by ACT in consultation with partners.

The Programme highlights that "The CA-specific core technologies, innovations and practices will need to be promoted in combination with the relevant "CA-associated"

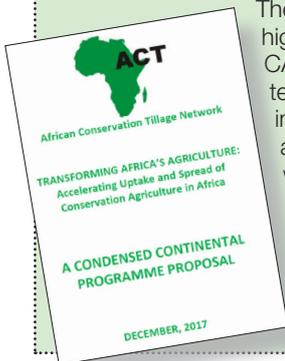
good technologies, innovations and practices such as those related to the development, management and upgrading of priority agricultural commodity value chains in line with the *Malabo Declaration on African Agriculture and CAADP Implementation Strategy and Roadmap*".

The six areas of focus to be implemented in this programme and their respective outputs include:

- i) Strategic Network Visioning and Repositioning,
- ii) Strengthening CA Capacity at Systemic, Organizational and Individual Levels,

- iii) Advocating Formulation of CA Supportive Evidence-Based Policies and Regulatory Frameworks,
- iv) Packaging and scaling up CA Technologies, Innovations and Practices,
- v) Supporting CA Entrepreneurship and Business Development,
- vi) Establishing Integrated CA Knowledge and Information Management System.

[Read more](#)



Framework for Sustainable Agricultural Mechanization (SAM) in Africa



The African Union Commission's Department of Rural Economy and Agriculture, and FAO organized the development of a Framework for SAM as a guide to AU member states. A workshop held 11-12 May 2017 at the AUC Headquarters in Addis Ababa <https://goo.gl/0ounpk> and attended

by experts from private sector, national universities and research institutions, civil society, and regional organisations including the AUC, FAO, AfDB and UNECA validated the draft document. The report for the validation workshop is available at <https://goo.gl/HMZQ3S>. Realization of the strategy has gone

through a series of consultative meetings with support of many African institutions and partners such as World Bank, FAO, CEMA, UNIDO, UNACOMA, AGRA and ACT.

Read more: <http://africamechanize.act-africa.org/>

The draft framework for SAMA states that mechanization should be viewed as a necessary component of a transformational development process that promotes the sustainable commercialization and modernization of small, medium and large-scale farms in order to accelerate agricultural development and initiate sustained poverty-reducing economic growth in both rural and urban areas.

Weaving Machinery and ACT kickstart the innovative packaging unlocking medium and smallholder farmer access to no till seeding services

The ACT-Weaving Machinery (UK) partnership allowed for redesign and adaptation of the GD air seeder drill designs to suit the targeted low power requirement group, multi-seed capability, and robustness for the rugged terrains. The seed drills are being validated at tertiary agricultural training and/or research institutions annotated as Conservation Agriculture Centres of Excellence (CA CoE). The CoEs serve as hubs for CA and SAM training, demonstrations, research and outreach for the seed drills.

Contrary to the norm, the no-till seed drill promotions are not targeting farmers, but service providers (contractors) with the entrepreneurship drive to use them in their production farms and provision of hire out seeding services to neighbours on commercial business terms. Service providers who prefer CA CoE validated models, are linked by the CoE to the preferred suppliers (or manufacturers) and also to financing institutions, who may at times include the suppliers.



The CoE does, through their outreach wings, organise the farmers and pool their CA services and input demands, which are then linked to inputs/service demands of the service providers.

ACT invites other suppliers and manufacturers interested in demonstrating and site testing of their equipment at the ACT CoEs to write to africamechanize@act-africa.org for further information and linkages.

[Read more.](#)

The Seventh World Congress on Conservation Agriculture (7WCCA) in Rosario Argentina

1-4 AUGUST 2017
ROSARIO · ARGENTINA

The world's food challenges, the planet's environmental challenges

The 7th World Congress on Conservation Agriculture will be held in Rosario - Argentina along with the XXV Aapresid's Congress.

from all around the world, along with financing organisations, risk brokers and other stakeholders to identify the best solutions for all regions. Download the Proceedings at: <https://goo.gl/aaDPPE> or <https://goo.gl/SpoqYL>

2017

WORLD CONGRESS 7
on Conservation Agriculture

Congreso Aapresid

1 to 4 August
Rosario
Argentina

PROCEEDINGS

The 7WCCA aimed to demonstrate that CA is actually the best tool to mitigate climate change as well as to adapt to the effects of climate change, contributing to food security, promoting resilience and biodiversity and at the same time reversing the trend of soil degradation. The organizers also wanted to show the

needs of having the adequate policies and applied prospective research to take decisions at the same roundtable with farmers. The organizers brought together at the 7WCCA combined with the 25th annual AAPRESID meeting, 5,000 participants comprised of farmers, policy makers, scientists and educationists

In the context of Africa, presentations were made by AfDB, AAPRESID, CIMMYT and ACT. Dr Fregene Matin from AfDB made presentations on spreading the potential use of CA in Africa and their Green Funds programme.



Regional meeting of Norwegian climate smart agriculture partners in Lusaka

The three-day (12-14 October 2017) meeting brought together some 70 participants from Eastern and Southern Africa, including Regional bodies, Regional Economic Communities, National Governments, research organizations, CGIAR, UN organizations, private sector, civil societies, and farmer organisations. The agenda was enhancing coordination between the partners, ensuring provision of quality CA/CSA training/advisory services, and markets for smallholders for accelerated adoption of CA/CSA. NORAD was represented by Ms Anne Liv Evensen, (Senior Adviser, Civil Society Department Section for Development Initiatives), and Mr Odd Eirik Arnesen, Senior Adviser Agriculture and Food Security.

The meeting was informed of a survey conducted by ACT and partners in 2016, which confirms that CA is now being adopted in more than 20 countries in Africa as a core production component of climate-smart agriculture (CSA). The current conservative estimate of cropland under CA systems in Africa is about 2.68 M ha, an increase of some 447% since 2008/09. South Africa had the largest area under CA (1.75 M ha) while Zambia had the second largest (316,000 ha). The percentage cropland area under CA is also largest with South Africa (14.0%), followed by Zambia (8.32%), while the continent averages 2.58%. However, compared to our very own Lusaka Declaration of the First

Africa Congress target of reaching 25 million farm households by 2025, we have a shortfall of 22.32 M ha. The BIG QUESTION is how do we accelerate the adoption of CA to ensure that we reach the target?

The meeting concluded on i) the need for more practical collaboration, coordination and exchange of experiences and knowledge on CA/CSA across partners, ii) the need for CA quality assurance for CA partners. Endorsed entry point was conducting “friendly peer reviews” of the CA partners, by the CA CoE as a hub, iii) increase the core-team compositions and use of the CA CoE to generate CA/CSA learnings for everybody, and iv) partners to integrate markets into their programmes informed by the MUSIKA model for smallholder farmers in Southern Africa.

On another front, participants were reminded on the upcoming Second Africa Congress on Conservation Agriculture (2ACCA) www.africacacongress.org with theme “Making Climate-Smart Agriculture Real in Africa with Conservation Agriculture: Supporting the Malabo Declaration and Agenda 2063” which will provide a forum, using dedicated sub-themes, to share knowledge and seek for more commitment and investment for CA in Africa.



The CA workshop participants during a field visit to the CFU training site at Chisamba, Zambia.

“Africa holds the key for feeding the nine billion people that will inhabit this planet by 2050”

- Dr. Akinwumi Adesina, President of the African Development Bank and 2017 World Food Prize Laureate, during his Norman Borlaug Lecture



At the special event on Transforming the African Savannah Initiatives (TASI), President Adesina stated that:

“The initiative **will start** by bringing approximately **2 million hectares** of savannah in **eight** African countries - Ghana, Guinea, Democratic Republic of Congo, Central African Republic, Uganda, Kenya, Zambia, and Mozambique - under the cultivation of maize, soybean, and livestock production in optimum conditions.

Africa must learn from the experiences that have worked elsewhere, while tailoring the interventions to the specific realities of Africa. We must ensure that small, medium scale and large-scale commercial farmers co-exist in a way that allows opportunities for all.

Partnerships in research and development will be crucial. That is why the African Development Bank has engaged to work with the strongest possible organizations with proven track records in tropical agriculture from South America. This includes the Brazilian Research Corporation (EMBRAPA), the Agricultural Corporation of Brazil (CAMPO), as well as others with long experience in Conservation Agriculture, including the Argentine Association of Zero-tillage, and the Argentine Agricultural Research Institute.”

Read more: <https://goo.gl/H79Zzq>

Namibia targets 50% crop farmers practicing CA by 2022

On March 17, 2015, Namibia launched the Comprehensive Conservation Agriculture Programme (CCAP), which targets 50% crop farmers practicing CA by 2022. During the CA manual pretesting workshop Namibia's Minister of Agriculture, Water and Forestry Hon. John Mutorwa reiterated the Country's agenda on Conservation Agriculture.

Conservation Agriculture addresses the problem of low and erratic rainfall and low soil nutrients status through the use of practices that reduce water losses and increase infiltration and by increasing soil carbon and nitrogen through the use of organic soil cover and legumes in rotation. It has been proven that CA enables the sustainable intensification of agriculture by conserving and enhancing the quality of soil, leading to high yields and the protection of the local environment and ecosystem services.

The CA manual pretesting workshop for extension workers was held in Rundu region, Namibia, from 22nd to 27th October 2017. The training was organised by FAO Namibia in collaboration with MAWF, ACT and SCORE, and attended by 56 participants from MAWF and other stakeholders. The ACT facilitation team was represented by Mr. Edward Chuma, Eng. Saidi Mkomwa, Prof. Amir Kassam and Mr. Peter Kuria.

The purpose of the pretesting was to demonstrate the use of the manual, identify areas of correction and equip the CA master trainers with the necessary skills to use the manual for training and the promotion of CA.



CA manual pretesting workshop participants (top); Ms Berfine Antindi, Deputy Director North Eastern Division (standing) closing the training.

The Hon. Minister addressed the participants encouraging them to use the expertise learnt to help farmers improve food production in the country. He reminded them that as the experts

and with the new knowledge gained they should be prepared to train their other colleagues to ensure that the CA knowledge is disseminated to all farmers.



The Minister Hon. John Mutorwa addressing participants during the CA workshop in Rundu.

Conservation Agriculture (CA) curriculum and manual development for tertiary agricultural and natural resources education institutions in Africa



Climate-Smart Agriculture in Action: Africa, Asia and Latin America.

The African Conservation Tillage Network (ACT) and the African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE) jointly convened the CA curriculum and manual development workshop in Nairobi on 4th to 6th December 2017.

A total of 29 participants comprising of top experts in CA, top educators in agriculture and natural resource management sciences, and in curriculum development. Those present in addition to the organizers were drawn from the University of Reading (UK), Kenyatta University (Kenya), University of Nairobi (Kenya), Nsuka University (Nigeria), Botswana College of Agriculture, Mekelle University (Ethiopia), Makerere University (Uganda), Zambia Virtual University, Egerton University (Kenya), Ekiti State University (Nigeria), Rongo University (Kenya), Copper

belt University (Zambia), Sokoine University (Tanzania), University of Limpopo (South Africa), University of Swaziland, Uyole Agricultural Research Institute (Tanzania), Gwebi College of Agriculture (Zimbabwe), and KALRO Njoro (Kenya).

The objective of this workshop was to develop a curriculum, in the form of a teaching module/tool for strengthening the delivery of CA and improving institutional capacities for upscaling the uptake of CA practices and initiatives in Africa.

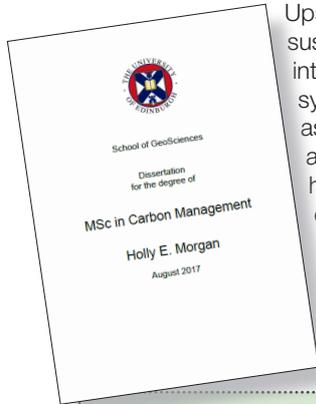
Participants acknowledged that CA is a practice whose adoption rate is growing at an estimated 10 million ha annually worldwide. CA is ecosystem-based agriculture that is both productive and climate smart. Despite these good attributes, CA is hardly taught in Africa. Workshop participants agreed on the need to provide CA education at different levels, starting

with educators in Agriculture and Natural Resource sciences, relevant policy makers, farmers, extensionists and entrepreneurs. The model CA curriculum to be developed will be available by March 2018. Further, participants developed the outline of a teaching manual and launched a competitive process for prospective authors to develop the contents. It was agreed that the manual would be based on existing knowledge and would be available in 2018.

In realisation of the first Africa congress on Conservation Agriculture declaration, it is expected that this CA curriculum will assist tertiary agricultural and natural resources education institutions in African countries to effectively integrate CA training in educational curricula, and promote the technology through training to develop human capacity as a strategy to support wider adoption of CA in Africa.

Shared Publications

Sustainable Agricultural Mechanization of Conservation Agriculture in Smallholder Kenyan Maize Farmers for Sustainable Intensification and Increased Climate Resilience – Dissertation by Holly .E. Morgan



Upscaling of sustainable-intensification systems such as conservation agriculture, which has shown great capacity to increase farm productivity and climate-resilience while reducing environmental

degradation, has yet seen limited uptake in sub-Saharan Africa despite its potential. The purpose of this study is to examine challenges and successes of sustainable agricultural mechanization of conservation agriculture, a vital component of the innovation's success, by conducting a location-based case-study in Laikipia, Kenya. Areas in need of attention were: finance, extension services, and equipment access. Recommendations for issue remediation were developed from stakeholder

interviews conducted in the case study, and findings from examination of mechanization success-stories in other countries and systems. Continued examination of trends across different communities and contexts will support a more robust, exhaustive understanding of mechanization challenges and opportunities, thereby enabling informed policy-making and project design for upscaling conservation agriculture.

Read more: <https://goo.gl/q7pGm3>

Productivity and profitability of manual and mechanized conservation agriculture (CA) systems in Eastern Zambia

Climate variability and declining soil fertility pose a major threat to sustainable agronomic and economic growth in Zambia. The objective of this study was to assess crop yield, land and labor productivity of conservation agriculture (CA) technologies in Eastern Zambia. On-farm trials were run from 2012–2015 and farmers were replicates of a randomized complete block design. The trials compared three CA systems against a conventional practice.

Yield and net return ha^{-1} were determined for maize and legume yield (kg ha^{-1}) produced by ridge and furrow tillage, CA dibble stick planting, CA animal traction ripping and direct seeding. The dibble stick, rip line and direct seeding CA systems had 6–18, 12–28 and 8–9% greater maize yield

relative to the conventional tillage system, respectively.

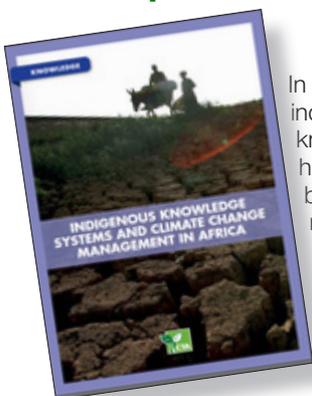


Rotation of maize with cowpea and soybean significantly increased maize yields in all CA systems. Intercropping maize with cowpea increased land productivity (e.g., the land equivalent

ratio for four seasons was 2.01) compared with full rotations under CA. Maize/cowpea intercropping in dibble stick CA produced the greatest net returns ($\text{US}\$312\text{--}767 \text{ ha}^{-1}$) compared with dibble stick maize-cowpea rotation ($\text{US}\$204\text{--}657$), dibble stick maize monoculture ($\text{US}\$108\text{--}584$) and the conventional practice ($\text{US}\$64\text{--}516$). The net-return for the animal traction CA systems showed that maize-soybean rotations using the ripper were more profitable than the direct seeder or conventional ridge and furrow systems. Agronomic and economic benefits of CA-based cropping systems highlight the good potential for improved food security and agricultural productivity for smallholder farmers.

Read more: <https://goo.gl/JK2sKj>

The power of indigenous knowledge in strengthening climate resilience



In recent years, indigenous knowledge (IK) has increasingly become recognized as integral to the formulation of effective climate adaptation strategies.

The extensive information provided in this publication is split into 15 chapters, which examine case studies from across Africa on the different uses of IK for

seasonal predictions of local climates, and the use of IK practices for climate change adaptation. These predictions are based on IK practices using several indicators including tree phenology, animal behavior and astronomical observations, and facilitate the decision-making of local communities to manage and adapt to climate risks. However, as climate change impacts the reliability of some of these indicators, such as tree phenology, it is important that farmers are supported to integrate their knowledge with scientific seasonal forecasting to enable them to make fully informed decisions. The current threats to IK and the policies and actions that could help to conserve it, are examined

by the case study authors, as well as ways to encourage the co-creation of climate knowledge by rural communities and development practitioners. "At CTA, in addition to helping carry out development programs in the field, we also encourage farmer innovation and the co-creation of knowledge, which we want to make more accessible. So this book was born out of these concerns," Dr Ajayi explained at the launch.

For more information on the article and publication: [The power of indigenous knowledge in strengthening climate resilience](https://doi.org/10.1017/9781108751111)

Climate-Smart Agriculture in Action: Africa, Asia and Latin America

This video shows how men and women farmers and other decision makers have applied the climate-smart agriculture approach in practice.



UNFAO shares project results from Kenya, Malawi, Zambia, Nicaragua and Vietnam. Kenyan smallholder farmers have addressed climate change through integrated livestock systems and improved their incomes. Ecosystem approach has reduced environmental degradation of mangroves and reduced the climate vulnerability of Nicaraguan communities. FAO's work with partner countries in Asia and Africa has generated solutions to decision makers

to overcome barriers in the sustainable adoption of climate-smart agriculture. Looking to the future, it won't be easy to feed the world in a changing climate, and farmers will not be able to do it alone. Making food production climate-smart requires: investments in agriculture, knowledge of locally suitable practices and harmonized policies.

To access the video visit: [Climate-Smart Agriculture in Action: Africa, Asia and Latin America](#)

Upcoming Events

The Africa Climate Smart Agriculture Congress 6th – 7th March 2018



The inaugural Africa Climate Smart Agriculture Congress will take place on 6-7 March 2018 in Nairobi, Kenya. Organised by the Aid & International Development Forum (AIDF), the Congress brings together senior representatives from ministries of agriculture, heads of key Agri-related public institutions, UN agencies, agricultural firms, NGOs, farm associations, agriculture research and development institutes, investors, donors and the private sector.

The agenda will cover technological innovations, capacity building, innovative financing, partnerships and the use of big data to advance climate-smart agriculture practices across East Africa. The participants will discover how to secure financial investment for CSA initiatives, improve agricultural productivity and scale adoption of technological innovations in agricultural systems. Other prominent topics include ICT for agri and mAgri innovations and supporting farmers through technology, data collection and sharing. **For more information:** <https://reliefweb.int/report/kenya/africa-climate-smart-agriculture-congress-innovations-partnerships-and-financing>

The Second Africa Congress on Conservation Agriculture (2ACCA) 9th-12th October 2018

The aim of 2ACCA is to bring together expert knowledge, information, and insights from practitioners from across different sectors and interests groups at all levels of agriculture development in the public, private and civil sectors. This diversity of knowledge and stakeholders is essential:

- to enable the desired multi-disciplinary and cross-sectoral development of CA as a core production component of climate-smart agriculture; and
- for the sustained mobilization of policy, institutional and community support to accelerate the widespread adoption and management of CA as a core element of the expanding climate-smart food and agriculture systems in Africa.



This is in line with the Malabo Declaration, AU's Agenda 2063 and the SDGs. The purpose of the 2ACCA initiative is 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.

This includes CA's role in: enhancing sustainable agricultural productivity, strengthening environmental and social resilience, and fostering efforts to provide for food and nutrition security as well as jobs and economic opportunities, especially for rural communities, including youth and women. The 2ACCA initiative provides "neutral space" for networking, collaboration and partnership to support the scaling-up of CA systems as the sustainable basis for CSA development across Africa.

The 2ACCA initiative brings together expert knowledge, information, and insights from practitioners from across different sectors and interests groups at all levels of agriculture development from the public, private and civil sectors. This diversity enables the desired multi-disciplinary and cross-sector "treatment" of CA for climate-smart agriculture – a feature essential for the success of CA scaling-up as an integral part of the growing food and agriculture systems in Africa.



Early Bird Registration for the second Africa congress on Conservation Agriculture opens 1st February 2018. For more information visit: [Second Africa Congress on Conservation Agriculture](#)

For more information, please contact: [Executive Secretary](#) | [African Conservation Tillage Network](#)

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