



Updates & News Alert

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Editor's view: Introducing the June-July 2019 CA Alert

Africa agriculture needs to be fundamentally transformed, away from the conventional tillage-based Green Revolution type agriculture to agro-ecologically-based no-till Conservation Agriculture (CA) supported by Sustainable Agricultural Mechanization and Ecosystems Management practices, in order to be more competitive, productive and sustainable and significantly contribute to alleviating poverty, improving food sufficiency and adapting to climate change. This desired need is further propelled by declining rural labour force, increasing feminization of agriculture, ageing farming population, low interest of youths in agriculture, increasing energy costs, declining farm incomes, climate change and high levels of post-harvest losses. Indeed, this new emerging trend is what defines the heart and perspective of ACT's core mandate.

In order to facilitate effective promotion of the sustainably mechanized Conservation Agriculture technologies and practices in Africa and beyond, appropriate and affordable the agro-ecological and socio-economic based technologies and innovations anchored on the fundamental CA and SAM concepts and applications needs 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 lead in facilitating, coordinating and enabling knowledge and information sharing among the African's agricultural actors and practitioners. It is always in its strive to establish and execute appropriate knowledge and information sharing platforms and systems tailored to different target groups at different levels in the continent and beyond. The Network acknowledges that information



is an important resource which is required for effective mobilization and utilization of resources, policy formulation and implementation and other activities involved in agricultural development. Relevant information has to be made readily available to various users including policy makers, researchers, extension workers and farmers among others engaged in the agricultural sector. Many different organisations and actors are involved in developing and disseminating Conservation Agriculture related knowledge and skills in different parts of Africa, leading to a broad range of opportunities and needs for information transfer.

In acknowledging the above fundamental need, the network is in process of complementing this monthly news alert with thematic guided 'information series' that will enable the capture for sharing of thematic new innovations, technological practices and case studies. The ACT **"Information Series"** will build on the

initial series initiated earlier and available at

<http://www.act-africa.org/library.php?com=5&com2=20&com3=64&com4=41&com5=>. It will focus on the promotion, adaptation and adoption of CA, SAM and other associated technologies with an objective to contribute to the realization of "The Africa we Want" as prescribed in Agenda 2063.

Articles to this tool will relate to CA, SAM and Ecosystem Management and will be sourced from various contributors across the continent. Each contributor will share he/her story, case or article to ACT Secretariat for review and compilation. Unique to this, all published articles will be fully attributed to the author and accordingly acknowledged. ACT encourages potential contributors and CA/SAM/CSA actors to share their stories, innovative solutions and experiences in form of articles for inclusion in this new information tool 'ACT information Series.'

Nonetheless, ACT acknowledges the various sources, authors, reporters, organizations and practitioners whose articles appear in this June - July 2019 issue, their geo-diversity is a clear testimony of the enthusiasm and interest from various organizations, countries, researchers and scientists in Africa towards Sustainable Agriculture

Please you submit articles, links or views to kim@act-africa.org. Use the [#conservationagriculture](#), [#africamechanize](#) to share links on articles, journals, news on CA. SAM or EM for the 'information series, and tag us on twitter [@ACTillage](#).

Experiences and Lessons on Conservation Agriculture in Tanzania: Roadmap for Broadening Impacts and Integration in Industrialization Agenda of the Country



The Ministry of Agriculture, African Conservation Tillage Network (ACTN), Canadian Foodgrains Bank (CFGB), Conservation Farming Unit (CFU)-Tanzania and Diocese of Central Tanganyika (DCT) jointly organized a stakeholders' workshop titled "Experiences and Lessons on Conservation Agriculture in Tanzania: *Roadmap for Broadening Impacts and Integration in Industrialization Agenda of the Country*". The event was held on 3rd – 5th July 2019 at St Gasper Conference Hall, Kisasa, Dodoma, Tanzania with field visits to DCT Gawaye and Ipala village sites. This workshop brought together key CA stakeholders within and outside the country to interact, synthesize and share CA developments in Tanzania and provoke strategic thinking on how to collaboratively promote and implement the technology. The workshop enabled the generation of wealth of information on the short- and medium-term interventions to be undertaken by Tanzania in the endeavour to revolutionize the smallholder farmer to produce more profitability in sustainable way without robbing our children of their future

The workshop was attended by 125 participants (23% female) from central and government (38%), farmers (23%), NGOs (22%), researchers (7%), the academia, development partners, parliament, media, private sector and service providers.

It created a forum to share and discuss lessons and experiences for sustainable agricultural development, engage in joint undertakings to promote CA research, dissemination, and education as well as advocate for changes in policy and

perceptions in favour of CA and other smart technologies. It also helped to harmonize the interaction between structures and actors, and how these could synergize in order to facilitate adoption of CA and other climate - smart methods which may increase resilience and improve food security. Besides looking into how the technology can be effectively integrated into livestock production systems, agroforestry, soil and water conservation measures, mechanization and integrated pest management (e.g. push-pull).

While opening the workshop, the guest of honour the Minister of Agriculture Hon. Japhet Ngailonga Hasunga (MP) said, in order for Tanzania to attain the middle income status, we must have an assurance of sufficient food and this can be achieved by putting more efforts in promoting the use of Conservation Agriculture. He committed that in the on-going review of the Tanzania Agricultural Policy of 2013, issues of Conservation Agriculture (CA) must be included, such that CA becomes an important and primary tool in implementation of agricultural programmes.



Hon. Japhet Ngailonga Hasunga (MP)
and Minister of Agriculture delivering the

opening speech at the workshop

The Minister's commitment was upheld by the Chairman of the Parliamentary Committee of Agriculture, Livestock and Fisheries Hon. Mahmoud Mgemwa (MP) who promised to support all efforts of the Ministry in upscaling the adoption of Conservation Agriculture by ensuring that the new Agricultural Policy presented to parliament adequately covers Conservation Agriculture.

Earlier in his key note address to the workshop, the ACT Executive Secretary, Eng. Saidi Mkomwa shared with participants, that experiences over the last decade in promoting CA confirm of the massive opportunities of Conservation Agriculture and Sustainable Agricultural Mechanization in contributing to the second phase of the Agricultural Sector Development Programme, strategically in:

- Converting Tanzania's semi-arids, as proven in Dodoma, into Grain Baskets, without irrigation.
- Enabling greener power generation of the 2.1 megawatts Stigler's Gorge infrastructure forever by curbing siltation, increasing longevity of power generating turbines and thus doubling the lifespan of the infrastructure
- Empowering smallholder farmers to halving production costs while doubling yields, thus able to produce a surplus at competitive prices, penetrate markets and become commercial
- Production of sufficient and quality raw materials for Tanzania's Industrialization Agenda

For further information: info@act-africa.org

Let's secure Africa's soils to tackle climate change and hunger



Soils hold 70 percent of the planet's land-based carbon — three times the amount of carbon dioxide (CO₂) in the atmosphere. Not only is carbon-rich soil a crucial tool in mitigating climate change, it is also essential to meet the food needs of Africa's population, which is set to grow by 1.3 billion by 2050. When soils are managed sustainably,

they store organic carbon that locks in soil moisture and increases soil fertility; they also remove greenhouse gases from the atmosphere. Conversely, if they are poorly managed, soils release carbon into the atmosphere in the form of CO₂, which can contribute to climate change.

Today, on a global basis, soil carbon is being released from the soil more quickly than it is being replaced. This dangerous trend must be reversed. To do so, we need to know exactly how much organic carbon is sequestered in the soil, not only country by country, but often meter by meter. Most losses of soil carbon have been due to deforestation, along with harmful agricultural practices and soil erosion. Such losses have been pronounced in Africa. One [research review](#) estimates that soil organic carbon in croplands in southern Africa

has plummeted by 25 to 53 percent. Other studies in Western Kenya found decreases of up to 85 percent following deforestation!

During the recent [Global Soil Week](#) in Nairobi (May 26 – 30, 2019), discussions focused on creating an enabling environment for sustainable and climate resilient agriculture and soils were cited as the cornerstone for improved productivity and resilience. Yet despite the global commitments to conserve and improve the soils, action at the local level was missing. Land governance, including recognizing the rights of women and marginalized groups to access land for agriculture, proper local governance for land access and use, availability of information, extension and advisory services; and availability of finance and markets were identified as the main challenges hampering local actions towards sustainable soil management. [Read More](#)

Women and youth find profitable business pathways through small-scale mechanization

African farmers have ten times fewer mechanized tools per farm area than farmers in other developing regions, according to the [Malabo Panel's mechanization report](#). For the past six years, the Australian Centre for International Agricultural Research (ACIAR) funded Farm Mechanization and Conservation Agriculture for Sustainable Intensification (FACASI) project has explored ways to address poor access to appropriate mechanization solutions, which is [costing smallholders a lot in lost productivity](#).

"One of the key outcomes of the FACASI initiative has been to present women and youth with pathways into diverse profitable income generating businesses using small mechanization," says Alice Woodhead, professor in rural economies at the University of Southern Queensland in Australia. Woodhead shared her impressions following a field visit to Makonde, in north-western Zimbabwe, as part of the FACASI Phase 2 final review meeting held in May. Almost 40 public and private sector project partners from Zimbabwe and Ethiopia attended the event in Harare as well as ACIAR representatives.



Women entrepreneurs thrive on two wheels, Agatha Dzvangwe and Marianne Jaji shared their business experience as two-wheel tractor (2WT) service providers in Makonde. The 2WT, which can be used for multiple purposes from transporting, planting, fertilizer application and shelling, allows them to plant efficiently and provides additional income through hiring out their tractors to neighbouring farmers. For instance, during the

2018/19 season, Dzvangwe used the Fitarelli planter to plant ten hectares of maize, two hectares of sugar beans and five hectares of soybeans. Because of the planter's efficiency, she had enough extra time to hire out planting services to neighbouring farmers, earning \$100 for one hectare of maize, and double for the planting of soybean or sugar beans. [Read More](#)

A Farmer communication and supportive policies key to wider adoption of climate-smart agriculture

Climate-smart agriculture (CSA) is a game changer for smallholder farmers in Africa. Many farmers battle with the impacts of rising temperatures, frequent floods and droughts that affect productivity and profits. Extra effort is needed to boost their adoption of CSA practices. Success in their efforts would be reinforced if climate-smart agriculture (CSA) approaches were widely adopted, researchers say. Helping farmers understand the benefits and processes of implementing climate-smart practices and technologies – some of which have been promoted for many years, is key to improving the adoption of CSA.

“Most of the technologies that are climate-smart are knowledge-intensive,” says Joyce Mulila-Mitti, a researcher and plant specialist who has worked with

FAO in Southern Africa providing support for crop production intensification.

“To convince farmers, they need to understand why they have to change and why they are doing things differently. With climate change the message is to produce more with less by improving input use efficiency but farmers have to appreciate the rationale of changing how they farm, and this means building the capacities of both the farmers and the extension service to promote CSA.”

National Smallholder Farmers Association of Malawi ([NASFAM](#)) Head of Farm Services Unit, Wycliffe Kumbwenda says that inadequate and conflicting information at farmer level hinders the massive adoption of CSA. With [CTA support](#), NASFAM is implementing “Scaling-up climate-resilient solutions for



smallholder farmers in Malawi” project that promotes weather-based index insurance, drought tolerant seeds and information communication technology (ICT)-enabled weather information services. [Read More](#)

Combating Desertification and Drought: Food for Thought



As the weather continues to change and land becomes degraded, the socio-economic security implications are vast. In an effort to tackle these issues, climate-smart agriculture is quickly gaining traction around the world. According to the [United Nations Convention to Combat Desertification](#)

([UNCCD](#)), 12 million hectares of productive land become barren every year due to desertification and drought alone representing a loss of production of 20 million tons of grain. Not only is this an economic blow to almost 80 percent of the world's poor people who rely on agriculture for their livelihoods,

but hunger levels are also already rising globally. Such challenges will only be compounded as we must increase food production by 70 percent by 2050 in order to feed the entire world population.

The need for sustainable, climate-smart agriculture is thus clear. One practice that is gaining momentum is the development of improved, resilient crop varieties which help ensure both food and economic security. “In light of changing rainfall patterns where the old varieties which are drought-susceptible can no longer be produced under drought conditions, the new varieties which are developed for resilience have made a complete difference by bringing more beans on the table for food security as well as more beans for the market to bring income to the farmers,” one of [Pan-Africa Bean Research Alliance \(PABRA\)](#)'s bean breeders Rowland Chirwa told IPS.

[Syngenta Foundation for Sustainable Agriculture](#)'s Senior Scientific Advisor Vivienne Anthony spoke of the importance of connecting science to the realities on the ground. “The community of scientists need to connect with the entrepreneurs and people that are investing in the future here in Africa and to work together to improve crops, create jobs, create markets and not sit back as scientists. They need to engage with the business,” she said. [Read More](#).

The world needs topsoil to grow 95% of its food – but it's rapidly disappearing

The world grows 95% of its food in the uppermost layer of soil, making topsoil one of the most important components of our food system. But thanks to conventional farming practices, nearly half of the most productive soil has disappeared in the world in the last 150 years, threatening crop yields and contributing to nutrient pollution, dead zones and erosion. In the US alone, soil on cropland is eroding 10 times faster than it can be replenished. If we continue to degrade the soil at the rate we are now, the world could run out of topsoil in about 60 years, according to Maria-Helena Semedo of the UN's Food and Agriculture Organization. Without topsoil, the earth's ability to filter water, absorb carbon, and feed people plunges. Not


only that, but the food we do grow will probably be lower in vital nutrients.

The modern combination of intensive tilling, lack of cover crops, synthetic fertilizers and pesticide use has left farmland stripped of the nutrients, minerals and microbes that support healthy plant life. But some farmers are attempting to buck the trend and save their lands along with their livelihoods. "We never want to see our soil unless we go looking for it," says Keith Berns, a Nebraska farmer whose land hasn't seen a plough in three decades. He and his brother, Brian, began the practice of no-till on their 2,100-acre corn and soybean farm when they learned it could increase the carbon, nutrients and water available in the soil. Their farm is

in a particularly dry area of the country, and keeping moisture on their land is a top priority. For every 1% increase of carbon, an acre of land can hold an additional 40,000 gallons of water. Once they stopped tilling, the Berns family saw organic matter in the soil increase, which can have the added benefit of making foods grown in the soil more nutritious.

Organic matter, a section of soil that contains decomposing plant or animal tissue, serves as a reservoir of nutrients that microbes can feast upon while they provide nitrogen to growing plants and sequester carbon. The more organic matter, the more organisms the soil can support. [Read More](#)

Integrated Crop-Livestock: Conservation Agriculture for Sustainable Intensification (CASI) of Cereal-based Systems in North Africa and Central Asia




Use of conservation agriculture in crop-livestock systems (CLCA) in the drylands for enhanced water use efficiency, soil fertility and productivity in NEN and LAC countries

April 2018 – December 2022

Traveling workshop: Integration of the livestock component

Tunisia, 1-4 July 2019



icarda.org
International Center for Agricultural Research in the Dry Areas

The main objective of this project was to enhance the sustainability of natural resource use, increase farm profitability, and improve the livelihoods of resource-poor farmers through large-scale adoption of CA technologies capitalizing on the system synergies of crops, livestock, and soils in the drylands of CWANA. The project has created opportunities for the development of low-cost zero-till (ZT) seed drills and opened up venues for farmers in each country to access low-cost ZT seed drills to replace imported drills. Each country developed its own strategy which include: local manufacturer in Setif, Algeria, low-cost ZT seeders manufactured in Uzbekistan are easily accessible to Tajik farmers, development of a business model for the INGC (Institut National de Grandes Cultures) prototype in Tunisia. [Find more](#) or [read more](#)

Use of Conservation Agriculture in crop-livestock systems (CLCA) in the drylands for enhanced water use efficiency, soil fertility and productivity in NEN and LAC countries. The three countries involved in this CASI project include Algeria, Tunisia, and Tajikistan, like most other countries in the region, they are confronted with growing populations, increased urbanization and changing food demands and preferences. Food and

livelihood security of rural populations in these countries depend largely on crop-livestock production systems. Crop productivity and biomass are typically low under low rainfall dryland agricultural systems because of abiotic stresses and low levels of inputs. Moreover, increased frequencies of droughts and climatic risks further exacerbate abiotic stresses.

Events and Opportunities

Regional Conservation Agriculture Dialogue meeting 2019, September 25- 27, 2019, Lusaka, Zambia

With support from the FAO and the African Conservation Tillage Network (ACT), the CA Regional Working Group (CARWG) will organize a regional dialogue event for key CA stakeholders from September 25-27, 2019 at the Neelkanth Sarovar Premiere Hotel, Lusaka, Zambia. The event is expected to strengthen CA partnerships and will feature high level participation by key players in the region.

Purpose: The meeting aims to strengthen CA partnerships and develop a roadmap that will result in increased CA traction through alignment to Regional and National development frameworks.

Expected Outcome: Action plan for enhanced regional Partnerships so as to increase uptake of Conservation Agriculture among smallholder farmers in Southern Africa

Proposed Dates and Venue: The workshop will be held in **Lusaka, Zambia from 25th – 27th September 2019 (Arrival 24th September; Departure 28th September 2019).** The venue of the workshop will be communicated in due course.

Participants: Government Representatives, African Conservation Tillage Network (ACT), Conservation Farming Unit (CFU), FAO, Conservation Agriculture Platforms (CARWG, NCATFs), Regional Economic Commissions (SADC, ECOWAS, NEPAD, COMESA), FARNPAN, Southern African Confederation of Agricultural Unions (SACAU), Research Organizations (CIMMYT, IITA, ICRISAT, CCARDESA), Academia, Private Sector and the Media.

For more information visit: <http://carwg.act-africa.org/>

Conservation Agriculture: Gateway for Sustainable Intensification of Smallholder Systems: November 7 - November 22, 2019

Conservation Agriculture practices are gaining increased acceptance across the globe and are considered a harbinger for sustainable intensification of smallholder production systems. Their positive impact on natural resources and resilience to the effects of climate change are widely acknowledged. In the developing world, especially Africa and Asia, Conservation Agriculture is a relatively new concept and hence capacity development is vital for the adaptation, development and scaling of Conservation Agriculture-based technologies for impact on smallholder farmers in these regions.

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 (NRMR4D). [Find out more](#)

Global Science Conference on Climate-Smart Agriculture: October 8 - October 10, 2019



Since the term climate-smart agriculture (CSA) was coined in 2010, the biannual global science conferences on CSA have

emerged as the key global forum for scientific exchange to underpin CSA implementation.

The conference will build on the lessons from the previous conferences, with the overarching theme, "Transforming food systems under a changing climate," and will be held for the first time in Asia. [Learn more](#)

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



The 8th World 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.

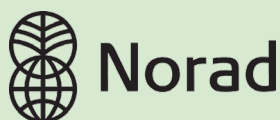
The theme of the Congress is: **The Future of Farming: Profitable and Sustainable Farming with Conservation Agriculture**

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

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from **Google Play store** at:



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