

CONSERVATION AGRICULTURE NEWSLETTER

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Mr. Gisha Gida and one of his neighbour who tried to follow his footsteps in practicing

The Trash Collector

Mr Gisha Gida, the project beneficiary of the Ethiopian Kale Heywet Church Development Commission's (EKHDC) "Zala Food Security and Gender Empowerment Project," was no exception to the prevalence of doubt on the use of conservation agriculture (CA). Like most of his people, he lacked faith in its effectiveness and viability to his severe climate. This was on the basis of limited exposure to CA principles and deeply entrenched reliance on traditional farming practices despite their long-documented limitations. His reluctance was also boosted by the specific limitations of his soil. The soil on which he decided to test CA was well known for being notoriously poor. It produced barely a decent harvest even in years of high rainfall. All due to the natural composition of the soil: low organic matter, with fine nearly silty texture, and high small rock content. Despite these initial doubts and the poor conditions of his field, Mr Gisha decided to embrace the EKHDC project training.

The shifting impact of CA+ (+composting) had an instantaneous impact within two years' duration in Mr Gisha's view. He witnessed his fields sparkle and shine so intensely, despite low rains, that an unquestionable boost

became apparent even to him. His crops no longer wilted and disintegrated under dry spells but stood impressive in their toughness. The leaves were turgid and intensely green, unambiguous signs of the increased water holding and soil fertility which had been induced by CA+ measures. In addition to these tangible signs of the health of the crop improving, Mr Gisha also harvested a significantly greater crop of maize than in any of his past years. His impressive results on his initial test plot fuelled his enthusiasm and convinced him of its potential to transform his entire farm. He recognized the clear benefits of minimal soil disturbance, diversified cropping, and, most importantly, the crucial role of maintaining a permanent soil cover. However, this last element presented a significant challenge. Mr Gisha's primary concern became the shortage of readily available soil cover, particularly mulch material.



Mr. Gisha Gida in one of his CA maize fields

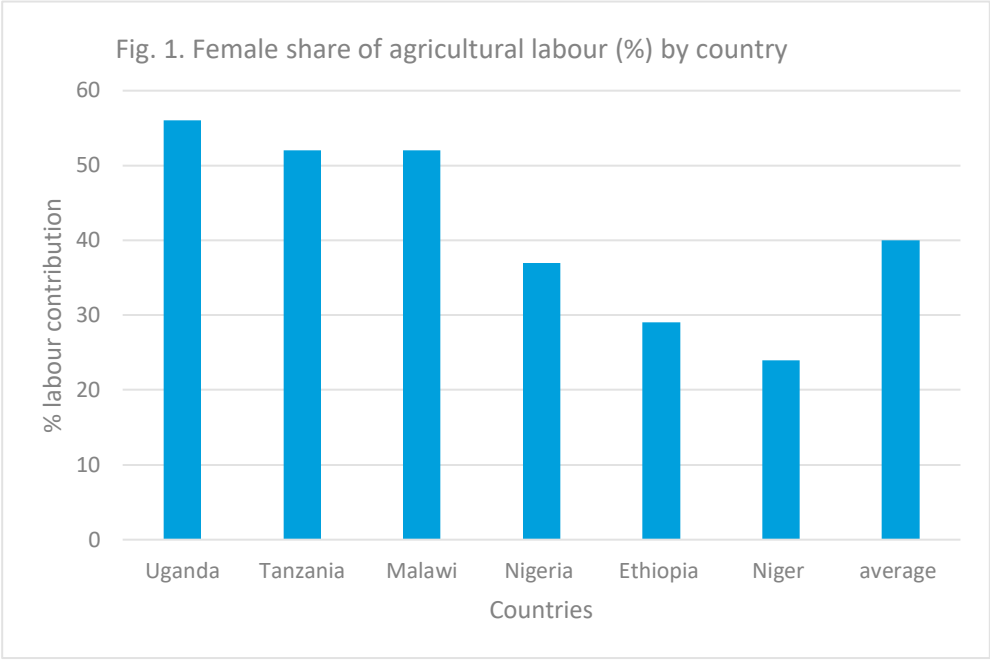
Undeterred, he used a clever approach and made use of whatever and any type of plant material was available to him. He did all that he could to recover crop residues from his farm following harvest so that no organic matter of benefit was wasted. He also used by-products of his animals, such as bedding and excess fodder, towards his mulch stock. Mr Gisha's creativity did not stop at his farm. He began to accumulate plant waste and roadside plants, perceiving usefulness in what others would throw away. He even had his neighbours bring him their plant clippings, if not edible by animals, to add to his mulch. His quest for mulch led him to the local open market, where he diligently collected discarded plant material, including chewed sugarcane stalks. This dedication to utilizing what others considered waste earned him the nickname "the trash collector," a testament to his resourcefulness and commitment to sustainable farming.

Mr Gisha's success with CA and his innovative approach to gaining mulch inspired other farmers in his area. Today, Mr Gisha's legacy is evident in the growing number of "trash collectors" competing for resources in the local market, demonstrating the expansion of adoption of CA practices.

Conservation Agriculture: A Potential Ally for Women in Gender-Biased Agricultural Systems

Women make important contributions to the agricultural and rural economies of every developing country. Their activities vary strongly between and within regions and are changing extremely rapidly in much of the globe, where economic and social forces are transforming agriculture. All these activities are not usually recorded as "economically active employment" in national accounts but are crucial to rural household well-being. The agricultural sector in the majority of developing countries is performing below its potential, partly because women,

who are a valuable resource in agriculture and rural economies as farmers, laborers and businesspeople, almost everywhere face more binding constraints to access productive resources than men.



For example, research analysing individual and plot-level labour data from nationally representative household surveys in six Sub-Saharan African countries found that women contribute an average of 40% of the labour in crop production. This share is slightly higher than 50% in Malawi, Tanzania, and Uganda, but significantly lower in Nigeria (37%), Ethiopia (29%), and Niger (24%) (Fig. 1).

This study has also shown that while land preparation in crop

production is often traditionally viewed as a male domain, a perception reflected somewhat in data from Ethiopia and Niger, women's involvement across different agricultural activities shows little variation in Tanzania, Malawi, and Nigeria (Tab.1).

Gender dynamics both influence and are influenced by various aspects of agriculture, including tasks, practices, and roles. They also play a significant role in shaping relationships and outcomes within the farming environment. Within the existing gender-disadvantaged farming systems in developing countries, which needs policy intervention and social behavioural change, adopting conservation agriculture (CA) presents a good opportunity to increase women's benefit and decrease their work burden. While such systems may rely on men in the domain of landholding, access to resources, and decision-making, the inherent character of CA can enable greater involvement and participation of women. Through the lessening of physical workload in agriculture, improvement of soil health and fertility, and enhanced resilience of agriculture to climate change, CA can put women on par and raise the number of women benefited in agriculture.

Activity domain	Tanzania	Malawi	Niger	Uganda	Northern Nigeria	Southern Nigeria	Ethiopia	Total
Land preparation	52	53	18		31	51	26	33
Planting, weeding	53	53	25		31	51	26	33
Harvesting	54	51	28		34	51	37	36
Total	53	52	24	56	32	51	29	40

TABLE 1i. FEMALE SHARE OF AGRICULTURAL LABOUR (%) BY ACTIVITY DOMAIN AND COUNTRY.

One major way CA can shift the pendulum towards women is by cutting down on drudgery in labour-intensive work. Traditional farming methods such as intensive ploughing, weeding, and harvesting are traditionally labour-intensive and disproportionately bear on women (Table 1). In most areas, CA's minimum tillage approach significantly cuts down on the amount of physical labour required in preparing land, in generally done by men. Similarly, mulching and cover cropping also suppress weeds, minimizing time for labour-intensive hand weeding. Minimizing the workload gives women enough time and energy to devote themselves to other productive activities, like tending to home gardens, livestock, or participating in income-generating activities. The saved time can also be utilized for education, childcare, or volunteering, adding to the social status and well-being of women.

In addition, the emphasis of CA on water conservation and soil health has a direct impact on women since they are usually most engaged in providing food to the family. Improved soil quality leads to increased crop production and more predictable harvests, which give the household a better food supply. The greater water-holding capacity of the soil makes farms more resistant to droughts, a significant factor in large parts of the developing world where women do the household chores of bringing water into the house for domestic consumption and irrigation. Through improved farm production and reduced vulnerability to climate shocks, CA empowers women as main breadwinners and enhances their ability to make decisions at home about food and resource management. Besides the clear advantages of reduced working hours and productivity, CA has the potential to provide women with a place at the decision-making table, and access to resources. With the increased practice of CA farming practices, and more individuals becoming aware of the advantages they have to provide, women's experience and knowledge in the application of these practices can be well paid for.

In general, women have been at the forefront of community-led initiatives addressing climate change and food security issues. As crucial agents of change in CA, their unique knowledge, contribution and skills are essential for achieving sustainable agricultural practices and enhancing community resilience to climate change.

¹ A. PALACIOS-LOPEZ ET AL. / FOOD POLICY 67 (2017) 52–63

Unlocking Africa's Agricultural Potential: Bridging the Technology Adoption Gap

Africa's agricultural sector is the backbone of the African continent's economy, supporting millions of livelihoods and contributing significantly to the countries' Gross Domestic Product (GDP). Yet, despite its pivotal role, the sector remains mired in low productivity and limited technological advancement. These challenges, far from being insurmountable obstacles, represent an untapped opportunity to transform agriculture into a powerful engine of economic growth, poverty alleviation, and food security.

To seize this opportunity, we must confront the barriers to technology adoption that impede progress and embrace tailored, context-specific strategies. Recent research highlights the challenges and actionable solutions that can bridge Africa's agricultural technology gap, setting the stage for a thriving agricultural future.

BARRIERS TO TECHNOLOGY ADOPTION

At the heart of Africa's agricultural stagnation lies a constellation of barriers that limit farmers' ability to adopt transformative technologies. Chief among these is persistently low productivity, with African farmers lagging significantly behind their global counterparts in crop yields. This disparity arises from a combination of limited access to modern technologies—such as improved seeds, fertilizers, and irrigation systems—and systemic constraints that perpetuate the status quo. Financial barriers loom large, with smallholder farmers often lacking access to credit, savings, and insurance. This financial exclusion hinders their ability to invest in critical tools and innovations. At the same time, inadequate infrastructure—from poorly maintained roads to insufficient storage facilities isolates farmers from lucrative markets and inflates production costs.

Knowledge gaps exacerbate these challenges. Many farmers lack access to reliable information about best practices, soil conditions, climate trends, effective extension services, and farming techniques. This dearth of knowledge keeps them tethered to outdated methods, further limiting their productivity. Compounding these issues is the vast diversity of Africa's agro-ecological and socioeconomic landscapes, which defy one-size-fits-all solutions. Finally, chronic underinvestment in agricultural research and development (R&D) has stifled innovation, depriving farmers of the tools they need to thrive.

REFRAMING CONSTRAINTS

To address these challenges, it is essential to reframe barriers as design requirements. Financial constraints, for instance, should inspire the creation of tailored financial products such as microloans or weather-indexed insurance that cater specifically to the needs of smallholder farmers. Infrastructure deficits call for investment in rural feeder roads, efficient storage facilities, and improved market linkages to reduce costs and connect farmers to broader opportunities.

Knowledge asymmetries can be addressed through robust agricultural extension services and digital platforms that provide real-time updates on weather, market prices, and farming techniques. Context-specific solutions must also embrace Africa's diversity, tailoring interventions to the unique conditions of each region, whether that means enhancing irrigation in arid zones or improving seed access in tropical climates. The appropriate solution needs a comprehensive and multi-pronged approach. Unlocking Africa's agricultural potential requires a holistic strategy that tackles these barriers head-on. Financial inclusion, knowledge systems, infrastructure development, governance reform, and climate resilience are the pillars of this approach.

FINANCIAL INCLUSION

Empowering farmers economically is the first step. By developing innovative financial products like weather-indexed insurance and microloans, farmers can mitigate risks and make confident investments in new technologies. Financial literacy programs further equip farmers to make informed economic decisions, ensuring they can maximize the benefits of these tools.

KNOWLEDGE SYSTEMS

Bridging the information gap is equally critical. Agricultural extension services, bolstered by digital tools such as mobile apps and SMS-based platforms, can deliver real-time data on weather, market conditions, and farming techniques. Peer-to-peer learning initiatives like farmer field schools create collaborative spaces where farmers can share knowledge and adopt proven practices.

INFRASTRUCTURE DEVELOPMENT

Investing in rural infrastructure is vital for reducing costs and improving market access. Better roads, efficient storage facilities, and reliable transport networks enable farmers to connect with markets, reduce post-harvest losses, and increase profitability. Strengthening value chains ensures that farmers capture more value from their produce while reducing exposure to price volatility.

GOVERNANCE REFORM

Weak institutions and governance structures undermine agricultural progress. Secure land tenure systems incentivize farmers to invest in their land, while effective policy frameworks encourage private sector involvement. Addressing corruption and promoting accountability are essential to building trust and ensuring that resources reach those who need them most.

CLIMATE RESILIENCE

As climate change intensifies, integrating climate-smart practices into agriculture becomes imperative. Conservation agriculture, crop diversification, and efficient water management systems build resilience against environmental shocks. Early warning systems for extreme weather events equip farmers with the tools they need to safeguard their livelihoods.

A VISION FOR TRANSFORMATION

The path to agricultural transformation in Africa is challenging but achievable. By addressing the barriers to technology adoption with innovative financial tools, improved knowledge systems, enhanced infrastructure, and tailored interventions, Africa can unlock its agricultural potential and pave the way for a more prosperous future.

Collaboration is the linchpin of this vision. Governments, NGOs, private sector actors, and international organizations must work together to foster innovation and implement these strategies effectively. With the right investments and partnerships, Africa's agricultural sector can thrive, driving economic growth and ensuring food security for millions.

The time to act is now. By bridging the technology gap and empowering farmers to reach their full potential, it is possible to transform Africa's agricultural landscape and build a brighter, food-secure future for generations to come.

ALTA TRAVEL SCHEDULES

Jean Twilingiyumukiza:

16 -24, July 2025
Burera and Kayonza, Rwanda
Situation Assessment for MCC/WFP Projects

25-29, August 2025
CWS, Nyarugusu Tanzania
Partner support and training visit

John Mbae:

8 – 11, July 2025
Embu, Kenya-Master Trainer Refresher

21- 24, July 2025
Kibwezi, Kenya
CoP Gathering for Kenyan Nature Plus partners

21, July - 2, August 2025
Lodwar, Kenya
ADRA-ke, Government staff and partner Staff training

Lidet Sitotaw

13-19 July 2025
Afar- Chifera (Ethiopia) to give training for SSD staff and government experts

23-26 July 2025
Nekebeta (Ethiopia) to visit Nature+ project and to provide technical support for data collection

5-8 August 2025

Debre Markos (Ethiopia) to give training on data collection for MSCFSO staff

15-18 September 2025
Assosa (Ethiopia) to visit FH Ethiopia's SCASI project

22-26 September 2025
Afar- Chifera (Ethiopia) to visit irrigation activities and provide technical support

Lilian Zheke:

24- 28 August 2025
Chimoio, Mozambique
Community of Practice -Nature+ partners

29 September to 2 October, 2025
ADRA-Sussundenga, Mozambique
Partner support and training Visit

Nester Mashingaidze

14 - 22 July 2025
Nebbi and Arua, Uganda
CoU Nebbi Diocese and CoU Diocese of Madi West Nile support visiting and training

23 -28 July 2025
Terego, Uganda
DMWN, PAG, and RICE-WN training and support visits