

Beyond profit: How innovation is helping Africa's agri-industry feed the world

By [Paul McKane](#)

22 Feb 2018

Africa's agricultural sector is of immense importance to the world. With one-quarter of the world's arable land, Africa is expected to play a leading role in ensuring the global population - expected to grow to nine billion by 2050 - has access to a secure source of food. This has led the World Bank to predict that Africa's agricultural sector will grow to \$1 trillion by 2030.



Kate HoltAusAID via [Wikimedia Commons](#)

However, despite 65% of the continent's labour force engaged in agriculture and 32% of the continent's GDP stemming from this sector, Africa only contributes 10% of global agricultural output. Key factors contributing to this is a lack of access to markets and financing, as well as productivity levels that are well below developed world standards.

For Africa's agricultural sector to reach its potential and meet the food needs of a growing global population, improvements in four key areas need to be achieved, namely:

- **Increased productivity**, including access to financing and education, integration of end-to-end processes to track farm-to-fork, and affordable access to machinery;
- **Improved food quality and safety** through track-and-trace of the origin of products at every step of the logistics chain, as well as reducing the use of pesticides;
- **Better international go-to-market** by professionalising the marketing of African agricultural products, and enabling access to regional and global markets for smallholder farmers who constitute the majority of Africa's agricultural sector; and
- **Improved government steering**, aimed at guiding production and export and prioritising securing food and nutrition needs of local populations.

The challenge of productivity

Africa's agri-sector consists mostly of a large number of subsistence farmers, who generally sell or trade their produce



Paul McKane, Industry Value Advisor: Consumer Industries at SAP Africa

market access to sell their goods.

locally. Their output is often limited by their access to equipment and information: only 5% of the cultivated land on the continent makes use of irrigation, compared to 38% in Asia, while the sparse use of fertiliser – as little as 7.4kg per hectare in Ghana compared to 100kg in South Asia – contributes to further underperformance. Many have no access to farming machines to automate some of the more time-consuming and physically demanding work.

There is also a prevailing disconnect between smallholder farmer production and real-time market needs, which hampers government efforts to steer the industry strategically to serve local economic and food security needs. One free trade agreement in the east of the continent was suspended after one of the governments involved identified that the food being exported was much-needed locally.

On the topic of exports: even Africa's leading agricultural producers have limited access to global markets. Egypt and Nigeria may produce one-third of the continent's agricultural output, but due to a lack of monitoring and unclear origin, the produce from these two agricultural powerhouses often fail to inspire confidence in global buyers, leaving smallholder farmers with only local

This has created an urgent need to develop a holistic technology-led approach to addressing productivity and quality concerns across the entire agriculture value chain. Encouragingly, a number of powerful new technologies are emerging to digitise Africa's agricultural sector and bring a slew of new advances in productivity and quality.



You can't eat your smartphone: Why agriculture is the first frontier of African innovation

Ashley Boag 14 Nov 2017



Digitising Africa's agri-industry

Digital farming combines several key technologies to make farming more efficient and sustainable, and to create opportunities for rural farmers to gain access to the global marketplace.

The megatrend of **hyperconnectivity, driven by IoT and mobile phones**, is connecting every market participant and machine, from farmers and seed producers to equipment manufacturers, commodity markets, governments and other stakeholders. Smallholder farmers in Africa are enjoying the benefits of hyperconnectivity through **mobile applications** that enable farmers to get SMS notification of weather information, market prices, and best practice.

Connected sensors for crops and livestock are generating huge amounts of **agricultural data** that is processed by **precision agriculture** algorithms to optimise production activities such as irrigation, fertiliser use, and crop protection. This enables farmers to increase yields and maintain global quality standards while saving input resources, minimising any negative effects on the environment.

“ By equipping Africa's smallholder farmers with productivity and quality-boosting technology tools, and ensuring they have access to market opportunities beyond their immediate environment, the continent's agricultural sector can start delivering on its potential to feed the world. ”

Improving access through innovation

By increasing transparency, digital agriculture also enables smallholder farmers to have end-to-end track-and-trace for certification requirements to fully integrate them into the supply chain. The Rural Sourcing Management solution developed by SAP in partnership with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the German Federal Ministry for Economic Cooperation and Development (BMZ), and other private sector partners, is integrating smallholder farmers into regional and global value chains.

It not only connects them to global markets, but a built-in e-learning component helps to deliver critical information and best practice to enhance the quality of their produce. By tracing produce from farm to fork, the Rural Sourcing Management solution also enables smallholder farmers to sell produce at market-related prices, increasing their revenue and opening up new markets in the process.

A new digital agriculture think-tank is also leveraging SAP's startup initiatives on the continent - such as the MakeIT initiative in Nigeria conducted in partnership with GIZ - to develop new solutions for Africa's agri-industry. The aim is to find niche solutions such as Hello Tractor, which functions as a sort of Uber for tractors by provisioning on-demand tractor services to smallholder farmers, or Ghana's AgroCenta, a fair-trade initiative aimed at improving access to markets among the region's smallholder farmers.

By equipping Africa's smallholder farmers with productivity and quality-boosting technology tools, and ensuring they have access to market opportunities beyond their immediate environment, the continent's agricultural sector can start delivering on its potential to feed the world. As the global population expands and food demand increases, Africa's smallholder farmers are set to become key players in the global economy of the future.

ABOUT THE AUTHOR

Paul McKane, Industry Value Advisor: Consumer Industries at SAP Africa

For more, visit: <https://www.bizcommunity.com>