

Transforming African agriculture: Investing in solutions to maximise farm-level productivity

According to the [2022 Global Report on Food Crises](#), an estimated 140 million people in Africa face acute food insecurity, but for Mandla Mpofu, Managing Director for Omnia's Nutriology division, the power to reverse this lies in the hands of Africans. "Every year, innovative new agricultural solutions are emerging in Africa, and local farming communities are determining new sustainable business practices that the rest of the globe could implement to reduce the massive amount of [food waste](#) we see each year," he says.



Source: [Freepik](#)

Improving agricultural productivity is going to be central to addressing Africa's growing food insecurity; and this can only be achieved through the mitigation of waste, the development of sustainable new agritech solutions, and the reintegration of the continent's fertiliser value chain.

From borehole and drip irrigation advances in Lesotho to [Food Climate Smart Agriculture scaling](#) in Kenya, local solutions are making their mark across Africa and beyond.

To further address water scarcity across South Africa, Omnia, for example, offers sensor technology for pivots and drip systems to help farmers combat water scarcity in South Africa, as part of the company's efforts to promote sustainability.

[The World Bank's recent announcement](#) echoes this, with news that it is ramping up its efforts and joining forces with partners across the African food systems landscape to help place the continent's agricultural sector at the heart of global food security and climate resilience.

"But it is up to us, as the private sector partnering with the public sector and other non-governmental organisations, to contribute to these developments through the shared process, product, service, and technological enhancements. However, as we do this, we must balance African development with the mitigation of our own impact on the environment.

Our growth strategy at Omnia, for example, is linked directly to our environmental strategy, which is to leverage technology

to conduct our business, and positively impact our customers, in the most sustainable manner possible," he says.

Food and agribusiness economics

In February, Mpofu headed a team from Omnia at the Argus Africa Fertilizer Conference in Kenya, where more than 150 companies from 40 countries discussed trends that will likely influence food and agribusiness economics over the next decade in Africa.

A recurring theme throughout the conference was the link between agribusiness and Environmental, Social, and Governance (ESG) strategies and sustainability. Through this lens, topics like the localisation of fertiliser production, fertiliser affordability, the integration of the fertiliser industry, and the need for more eco-friendly biological fertilisers were examined.

Despite its vast agricultural potential, and the fact that the majority of the labour force works in agriculture, Africa remains a net food importer and has a food trade deficit. This increases Africa's vulnerability, especially in crisis times like the Covid-19 pandemic and the Russia-Ukraine war. Strong support for the fertiliser value chain has the potential to accelerate the continent's journey towards a more competitive agriculture sector.

Guarding against instability

"These challenges laid bare the need for localisation of fertiliser production in Africa and for the formalisation of the industry to guard against future instability. The industry needs to actively corroborate to reset fertiliser pricing to better support farmers and ensure food security on the continent. This will need to be done with a focus on increasing trade in biological fertilisers to remain on par with global standards. Integrating Africa's fertiliser industry, within and between the private and public sectors, is crucial in reaching these goals," says Mpofu.

"Supplementary products are fast becoming vital to optimising crop yields beyond traditional fertilisers. With progressive farming practices, the products and services you employ must consider NUE (Nutrient Use Efficiency), WUE (Water Use Efficiency), soil sample data, remote sensing, and precision farming applications to optimise farm-level production," says Mpofu.



Source: [Freepik](#)

Biostimulants, for example, assist the plant in absorbing nutrients more effectively in normal conditions but also induce responses to better tolerate stressful environmental conditions, such as droughts, frost, and heatwaves, limiting loss while still being environmentally friendly.

From a research and development perspective, he believes that a focus on soil health will be essential to reduce nutrient requirements. "New grades with various levels of Nitrogen, Phosphorus, and Potassium are currently being explored to maximise nutrient uptake without any side effects. We have also engaged in R&D around the use of bacteria to improve both soil health and plant growth. We are seeing positive results in terms of the use of enzymes/bacteria to support nitrogen fixation in soil to improve soil health whilst the use of enzymes in specific combinations can improve plant health – specifically root development to enhance nutrient uptake," he says.

Ultimately, says Mpofo, it will be up to stakeholders across the agricultural sector to create favourable conditions for future farmers – even in the face of climate change – to maximise yields and profitability, lower food costs for consumers, and maintain a sustainable food ecosystem.

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