

Despite climate change concerns, bright outlook for agriculture



By [Maluta Netshaulu](#)

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While it is inevitable that Artificial Intelligence (AI) and technology, such as robots and the Internet of Things (IoT), will remain key drivers in 2022, the most likely impact on agriculture will come from climate change, mitigating its impact and ensuring that the sector prevails from hurdles that come what may.



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As seen during the COP26 Indaba in Glasgow last September, climate change and what this means to agriculture has a significant role to play going forward. While COP 26 will have escalated the awareness around climate change and the urgency required, it undoubtedly poses a risk for us (as a lender into agric) but also presents a massive opportunity as we assist farmers in building climate-resilient businesses, which are not only environmentally sustainable but also financially sustainable. Undoubtedly, climate change will continue to be an issue.

But it means **farmers will have to increase their adoption of innovative solutions** to make their operations resilient. These solutions are in the form of crop protection (like shade-netting), indoor agriculture, and sustainable production techniques (to improve soil health and biodiversity). Decarbonisation of the sector will also start to feature more which will be fast-tracked by the introduction of a carbon tax in the industry and traceability requirement by supply chains (for the benefit of consumers)

But there is no need for pessimism from a South African outlook. According to Agbiz, 2021 saw a good harvest of agricultural commodities, namely grains (maize and oilseeds), wine, and tree crops (fruits and nuts). In turn, this was further supported by reasonable commodity prices, which offset the increase in agricultural inputs (fertiliser, chemicals, and fuel), resulting in more significant revenue for the farming players. As a result, the outlook for 2022 promises to also be a good year due to forecasted good weather and supportive commodities demand (mainly from Asia) and prices.

Undeniably, **water scarcity will remain a challenge**, especially in the central and western regions of the country. But the use of precision farming (powered by AI, Big Data, robotics, IoT, Imagery, etc.) and efficient irrigation systems (drip and micro-irrigation) to ramp up as the need to optimise production (to reduce costs) becomes a necessity.

Inevitably, the erratic nature of electricity generation is expected to persist, resulting in energy shortages due to inadequate grid provision (Eskom). Since this is expected to worsen, it will see more and more primary producers and the value chain adopt alternative energy systems (such as renewable energy) to prevent downtime due to load shedding, cable theft, or cable fault, which will hurt their bottom-line.

Addressing inefficiencies

In terms of an evolving business model, farmers face an imperative to cut out the middleman via e-commerce, thus addressing inefficiencies brought on by the traditional use of intermediaries between primary producers and consumers. The outcome is margin erosion, where each player in the value chain takes a percentage of the income for services rendered. Consequently, these middlemen come from marketing agents or exporters, logistics companies, auction houses, fresh produce markets, manufacturers, processors, wholesalers, and retailers.

Up until recently, have primary producers started to approach end-consumers directly? The pioneers of this have been the wine producers who sell their products through their e-commerce platforms (websites). We have also seen large agribusinesses in the fruit sectors (citrus especially) setting up platforms to sell directly to consumers.

One of the positive spin-offs from Covid-19 has been the emergence of e-commerce platforms targeted at the agriculture sector. This platform's value proposition is to facilitate collaboration and trading between producers (farmers) and off-takers (buyers, like retailers or FMCGs) that wouldn't have necessarily traded together in the past. These platforms help to increase the farmers' margins by removing the middlemen and exposing the farmers to new markets (buyers) with the potential for improved revenue.

Currently, there are about ten e-commerce platforms in South Africa, namely Nile.ag, HelloChoice, SwiftVee, AgriKool, Khula App, TonnUp, Trigga, LivestockWealth, Tridge, Zire, etc. All these platforms are gaining traction in terms of adoption by farmers and buyers, which is evidenced by the volumes moving through them.

Worth noting is that Nedbank developed (inhouse) and launched its e-commerce platform Avo in the B2C market and will be throwing its B2B offering early in 2022 and this offering will include selected agriculture sectors. It is thus evident that these platforms are disrupting the traditional platforms such as fresh produce markets, livestock auctions, and inputs markets.

The Department of Agriculture, Land Reform and Rural Development (DALRRD), together with social partners (business and labour) have been working on agriculture and agro-processing master plans aimed at increasing the performance and competitiveness of selected sectors within the agriculture sector with the highest potential to create jobs and improve food security.

This would increase investment and funding into these sectors; the government is also at the advanced stages of rolling out funding instruments that will help create equity in the beneficiary's businesses. The funding model will inject equity in the form of grant funding (from the government) with the expectation that financial institutions like banks will advance lending

according to the set criteria – termed ‘Blended Funding Model’.

To this end, one must consider the opportunities on the continent via the African Continental Free Trade Area (AFCFTA), which brings with it the promise of considerable inclusive economic growth for Africa. Potentially, it enables one-stop border concepts are aimed at smooth movement of traffic and goods, some of which would be carrying fresh agricultural commodities to regional markets. It also brings expansion of activities into other African Countries, e.g., the Dangote Conglomerate spreading their agricultural activities into Zimbabwe, Zambia, etc.

But above all, as a bank premised on partnerships for doing good, the most successful businesses are underpinned by collaboration. Consider the Discovery business model – at the core of it is a platform business bringing insurance, retailers, health companies and travel, on a shared value model that delivers value to clients. It works efficiently. Other examples include Uber, Airbnb, Takealot.com, etc.

The agriculture sector is no different, and to tackle its most challenging issues such as transformation and climate change, the use of partnership models will become crucial. The benefit of using a partnership approach is that it leverages the partners’ capabilities for the benefit of the beneficiary (client).

Technology to take the lead

Looking ahead, technology is sure to play a vital role, although some argue it has not been utilised fully in the sector, its influence is growing. However, while not new, blockchain technology in the agric-space has been pedestrian, some believe that this tech can help with traceability which helps to improve food safety and sustainability. It can also be used to track impact and facilitate reporting and monitoring of SDGs.

The other tech (which is relatively new) which could potentially benefit the agriculture sector (from an agricultural services perspective) is the metaverse which combines the benefits of AR (Augmented Reality) and VR (Virtual Reality) to give a realistic experience to the users. This can help in the machinery maintenance space or even virtual farm management.

Innovation (often on the back of technology) is opening more and more opportunities (for a wide range of stakeholders, primary and secondary, both big and small). The opportunity to engage/participate on several platforms using cell phones and other devices makes agriculture much more accessible to a much more comprehensive range of players.

While innovative trends will undoubtedly have a positive role to play, the Covid-19 minefield, inflation concerns, rising food challenges are minefields that must creatively be navigated for the agriculture sector to remain above the grain.

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