Positioning agriculture as a key driver of Africa's growth

The potential to increase Africa's agricultural yields through the strategic use of data could place the continents' farmers at the heart of tomorrow's global economy. "New technologies readily available to Africa's farmers mean that the continent is finally at the moment where Africa's vast, as-yet-unrealised, agricultural opportunity can be made relevant to capital, mechanisation and new global markets," says Antois van der Westhuizen, managing director: sub-Saharan Africa, John Deere Financial.

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For example, John Deere has worked with ACDI/Voca, Adavance and Usaid as well as other input providers in Ghana, to mechanise and provide fertiliser and seeds to demonstration farms aimed at improving the yield of traditional farmers in the country.

"The results have been astounding," says van der Westhuizen. In some cases, "yields have increased seven-fold," he adds.

This confirms what John Deere already knew, namely, that if farmers are able to access mechanisation, fertiliser and seed and are then guided to apply these correctly, they can dramatically increase their yields.

What has changed is that today farmers in Kenya and Tanzania, for example, now transacting on M-PESA can access the formal economy by selling and buying goods online. Since these previously economically excluded farmers now have a digital footprint, "we can start getting a picture of their inputs, suppliers and costs, as well as their yields, off-takers, incomes and payments histories," says van der Westhuizen.

This data holds the key to revolutionising agriculture in Africa.

Without even having a bank account, "we now have a detailed view of the input, production and earning numbers of previously financially invisible farmers," says van der Westhuizen. With GPS technology able to provide accurate hectarage, "we can now quickly work out how certain inputs, and their cost, might be affordable to specific farmers given the increase in yield that we know these inputs will drive in that location," says van der Westhuizen.

In short, with just a handful of data points, the ability to provide credit to a much broader segment of Africa’s farmers increases dramatically. For the first time in history, all of Africa’s farmers are now potentially able to present the credit, expenditure, production and income records to make them bankable.

The next step will be to "use the data from multiple farmers collectively, to develop new supply chains and markets," says van der Westhuizen.

For example, if a grain mill in Kenya requires 2,000 tonnes of a certain crop each month and John Deere has the data on 100 farmers in that district each with the potential to produce 20 tonnes a month, the data can be used to build a supply chain for the mill that also provides the farmers guaranteed off-take.

Big data drives more finance to African agribusiness
2 Mar 2018

This data-driven view of the broader supply chain also gives John Deere Financial and other financiers the confidence to extend credit, long-lease machinery or fertilizer to these farmers, secure in the knowledge that the farmers will receive an income from the mill and be able to pay.

Moreover, "if we know that the 100 farmers have secure off-take agreements with a local mill, we can provide tractors or harvesters to start-up agricultural service companies to plough these farmer’s fields and harvest their crops, only collecting payment once the farmers have been paid by the mill," says van der Westhuizen.

Expanding the agricultural value chain

Using data in this way could justify further investment in irrigation systems, beneficiation plants, canneries or other industrial investment relevant to expanding the agricultural value chain.

Taken to scale across Africa, this kind of data has the potential to make most African countries food secure, freeing up the billions in hard currency that African governments currently spend importing food. This would, "ease Africa’s endemic hard currency crunches and reduce sovereign debt - releasing resources for development, infrastructure or education," explains van der Westhuizen.

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24 Jun 2019

Given agriculture’s much lower barriers to entry, farming also offers Africa far greater potential to broaden economic inclusion compared with, say, "hard currency-intensive mines which only employ a small percentage of the population, for a short time," explains van der Westhuizen. Since agriculture, properly managed and scientifically conducted, is more sustainable, the sector has the potential to produce food indefinitely. This offers Africa's mineral export-dependent economies the opportunity to diversify into much more sustainable exports, "with a far higher potential for beneficiation, industrialisation and economic inclusion," says van der Westhuizen.

This is all taking place in a global context in which, over time, the value of agricultural goods, especially food, is likely to increase relative to industrial products.

"African policymakers struggling to replicate the industrially-driven growth successes of many post-World War II developing economies, would do well to re-consider the vast export and development potential presented by agriculture in a food-scare and largely already industrialised world," says van der Westhuizen.

In short, agriculture, today seen as the low road to growth and development will, in time, become the source of the world's most valuable asset, namely, food.

Fortunately, the technology is finally here, "for Africa's policymakers to use the new data available on Africa's farmers to place agriculture – and Africa - at the heart of tomorrows global economy," concludes van der Westhuizen.