Big data drives more finance to African agribusiness

An increase in the accumulation of large datasets on agribusiness in Africa is proving crucial to the financing of a sector often overlooked by banks. "We're seeing the impact of the availability of data having a much more positive impact on access to financing," says Antois van der Westhuizen, managing director of John Deere Financial, Sub-Sahara Africa.

He tells GTR that, over the last 12 to 18 months, data on Africa’s agribusiness sector has increased, which is bringing about a change in financiers’ opinions on financing smaller-scale farming enterprises.

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The influx of data has been driven by companies such as John Deere, which collects and processes massive amounts of information on factors such as soil type, seed variety and weather by connecting its own pieces of equipment to one another as well as to owners and operators. In addition to working with commercial farmers engaged in precision farming, the company has also started gathering the same information from small-scale operators to calculate how they can achieve profitability, and, ultimately, bankability.

As the agri-sector evolves, it continues to attract much attention from technology entrepreneurs keen on developing new big data platforms and solutions. Aerobotics, a South African-based startup specialising in aerial data analytics, is one such company. “At the moment it’s very much a data collection play,” the company’s co-founder and CTO, Benji Meltzer, tells GTR.

Aerobotics' current product is an "early warning" system which helps farmers discover problems early on, and provides them with an overall assessment of their crop. The company has developed a platform that identifies the data using drone and satellite imagery and then diagnoses it. The longer-term plan is to become more predictive and diagnostic; to be able to capture the data and use it for longer-term projects, says Meltzer.

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Aerobotics' focus until now has been on large-scale commercial farmers, given the logistical challenges such as access to technology and the internet that exist in more rural locations. It has been involved in some pilot projects with insurance companies but is now working actively with Nedbank on finalising an agricultural data-gathering partnership.

Banks favour a partnered approach

Despite the increase in information and recent advances in big data analytical and computational capability, commercial banks are reticent to go it alone when engaging with small-scale farmers on a bilateral basis. Partnerships with the likes of commodity trading companies and agricultural cooperatives, which can act as the obligor and facilitator, remain key.

This thinking is linked to strict compliance and regulatory requirements, says Zhann Meyer, head of agricultural commodities in Nedbank's global commodity finance team.

"Engaging in input financing programmes with thousands of small-scale farmers operating on one hectare of communal land each makes effective management of production and delivery risk a cumbersome and expensive exercise. We definitely think that big data is a helpful tool, but we have to engage with a partner to make this work on a collective basis," he says.

"Most of our finance products are based on derivatives of classic pre-export finance models where you would typically pay for roll out of inputs and then expect the crop to come back as repayment for these loans. For us to practically implement these structures in our footprint countries, we would require a partnership based on both a reliable aggregator acting as our obligor, as well as accurate datasets to make informed decisions about crop germination and yield estimates."

He agrees that banks are becoming more comfortable with weather derivatives and index-based insurance products, which he says are becoming more predictable and accurate – purely because of the length of the period of data gathering and advancements in technology.

Financiers of all kinds taking big data seriously

Banks aside, other, more specialised financiers such as leasing companies and hedge funds are showing increased interest in investing in the sector. "They take big data a lot more seriously in terms of analysing affordability than what we see from the regional banks," says van der Westhuizen at John Deere Financial.

What's more, financiers of all kinds across the continent are coming round to the idea of using data when making business lending decisions.

"In Kenya and Tanzania, 72% of the population makes use of mobile banking, and only 8 to 12% use formalised banking systems. If you want to apply for a loan, you have to give bank statements, so the majority of clients won't be able to do that," he explains. But, he says, this is changing as more banks and leasing companies are now prepared to use clients' mobile money statements along with production data, provided by the likes of John Deere, to verify if they will be able to repay their loans.

"We've seen more and more loans being made available for those clients to start purchasing inputs as well as mechanised equipment," he adds.

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