Economics

# Ethiopia Uses Drones in Bid to Help Improve Food Security

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▶ Agriculture Transformation Agency led by ex JPMorgan analyst

▶ Agency also carried out soil mapping to push fertilizer use

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Workers pick tea at a green tea plantation, Keffa, Bonga, Ethiopia. *Photographer: Eric Lafforgue/Art in All of Us/Corbis via Getty Images*

A former <u>JPMorgan Chase & Co.</u> analyst is using drones and satellites to boost Ethiopia's agricultural exports and improve food security in a nation once synonymous with famine.

Africa's second most populous country, still struggles to feed itself. But now the government's <u>Agriculture Transformation Agency</u>, headed by Khalid Bomba, is

aiming for widespread commercial farming and food security in 20 years. It's modeling itself on initiatives in South Korea and Taiwan.

"The reason Ethiopia's agricultural sector has not developed is because we have not leveraged technology," said Bomba, 51, who spent a decade at JPMorgan on Wall Street and in London and later worked at the Bill & Melinda Gates Foundation developing and managing grants in the agriculture sector.

In the country of 108 million people agriculture accounts for 45% of the economy, 80% of employment and three quarters of total export earnings. Subsistence farming, small plots and limited access to fertilizer means that most farmers struggle.

Coffee, which originated in Ethiopia, and oilseeds are the country's two main exports, earning the country $1.2 billion in the year ending July 7, 2019. In addition to being Africa's largest coffee producer the country also exports roses and vegetables. It also grows tea and wine grapes.

"The biggest challenge Ethiopia faces now is a very large and growing population, which will keep increasing the demand for food and jobs," said Nega Wubeneh, adviser at the Alliance for a Green Revolution in Africa. "Despite the improvements in the productivity of crops, the yields are still below global averages and agronomic potential."

## Drone-Assisted Purchases

Bomba's agency uses satellite soil mapping, toll-free numbers, drones and an in-house consultancy to help farmers.

Potential buyers are able to zoom in on a map of Ethiopia, search for a farm by area and commodity, watch a drone video of the produce to assess its condition and call the farmers directly to purchase the crops. Small farmers have been clustered together so that they grow the same crop using the same methods.

"It's easier to find a market for 200 hectares of crop rather than half a hectare," Bomba said of the clusters, which produce wheat, corn, sesame, barley, fruit and

horticultural crops. The project plans to double the income of 5 million farmers within five years, he said in an interview in his spacious office in Addis Ababa.

The agency also aims to improve access to seeds and boost fertilizer use. Morocco's OCP Group has committed to building a $3.7 billion fertilizer plant, which is scheduled to open in 2023.

## Poor Infrastructure

The average for fertilizer consumption per hectare (2.47 acres) is 140 kilograms (309 pounds). In Ethiopia the usage is a 10th of that, according to the World Bank. In neighboring Kenya, farmers use an average of 36 kilograms of fertilizer per hectare.

That's important in a country that's seen its agricultural potential held back by poor infrastructure and a lack of access to markets and finance, according to Han Ulac Demirag, country director for Ethiopia and South Sudan for the International Fund for Agricultural Development.

"We want to make sure that people's perceptions that persist from the 1980s of drought and famine is replaced by a perception of an Ethiopia that is food secure. A country that feeds itself and feeds other parts of Africa," Bomba said.

*(Adds crops in fifth paragraph)*

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