



“Farm Like a Man:” How an App Brings Investors to Nigeria’s Female Smallholder Farmers

Farms below ten hectares produce the bulk of Africa’s food. Most smallholder farmers are women, and they are trapped in a gendered cycle of subsistence farming, with lesser access to credit, land, and cropping techniques. In Nigeria, a savings and investment app is changing the reality of thousands of rural farmers, by linking them to retail investors.

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This article appears as part of our series on sustainable development goals and tech-based solutions from Africa, which we are discussing with an African-German community.

In Lagos, Nigeria’s economic capital, a smartphone beeps. A message reminds its owner to grab one of several investment slots. “Bell Pepper: 10.5% in 4 months. Cucumber Plantation: 6% in 3 months. Sorghum Farm: 9.5% in 7 months.” Pictures of the vegetables and grains are stamped with a red “SOLD OUT” sign as Toyosi Mohammed scrolls through them.

“It always feels like you’re on Who Wants to Be a Millionaire; fastest fingers first,” says the student, 23, who was lucky to buy slots at NGN 10,000 (€20) each. The money will go towards her tuition at the Lagos state University. A two-hour drive away, Olapeju Umah has invested in pepper farms from the comfort of her gated community in Sangotedo, Lagos. The entrepreneur is saving to pay the lease for her food processing warehouse. She chooses multiple slots priced at NGN 50,000 (€98) each. “It’s 15% profit; I’m always excited to open my app,” Umah says.

Both women are supporting farms across central and northern Nigeria.



Olapeju Umah has been using the HerVest app for six months.



Toyosi Mohammed has been saving and investing for almost three years.

Mohammed, who juggles studying for her English Language degree with part-time work as a customer service agent in Lagos, invested in a maize farm almost 400 kilometres away.

That farm is in Omu-Aran, Kwara state, and Olanrewaju Adesiyan is one of 100 women whose crops are being supported by online investors. "I find it hard to believe that another woman will just press her phone, and she will be helping us here in Kwara to farm big-big crops like men do," says Adesiyan, who has been a farmer for over 30 years.

The retired teacher was first sceptical when she heard about HerVest, a women-focused digital platform that enables women to save money using an app, or to invest in farms owned by women: "One of my brothers-in-law informed me. I was thinking it would be only vegetables that we would farm, because they said it is for women."



Olanrewaju Adesiyan is one of millions of smallholder farmers in rural Nigeria

Women can 'farm like men'

Nigeria's agricultural output is mainly possible due to over 38 million smallholder farmers, and though up to 70% of them are women, most cannot plant large harvests because they do not hold the rights to the land on which they work. When they do own land, the money needed for labour and machinery is beyond women's incomes. They are therefore unable to farm certain lucrative crops in commercial quantities.

Adesiyan's own father farmed cocoa, the cash crop whose fortunes were surpassed only by Nigeria's crude oil boom of the 50s. Though Adesiyan owns the family land, the 59-year-old deviated from cocoa because hiring farm hands, and the longer germination period made it impossible to get quick returns.

"I was surprised when HerVest provided chemicals. Because the farming that I have been engaged in, before I could get fertiliser and some other things took a lot of time and it also affected my production. But now, things are going on well, with no problem," she said.

Adesiyan's fertiliser and labour fees are offset by the sums paid by HerVest's customers. The company calculates, then divides all costs into a number of slots that investors can buy on the app. Depending on the type of crop, each slot can range from NGN10,000 upwards and investors fix their money for a set period (the planting season). When the female farmers sell the harvest, the investors receive their money through the app, plus interest rates. Once the cycle is completed, women farmers can send information about their next crop to HerVest by sending a special code as a text message. Through this, they can seek funding.



HerVest assesses farming costs, then advertises investment slots on the app.



Investors like student Toyosi Mohammed buy the slots on the app.



HerVest trains farmers on financial literacy, covers cultivation and farm security costs.



Crops are sold, farm costs and investors are paid. HerVest and farmers share the profits.

'Investors cannot be disappointed'

The Omu-Aran maize (and rice) project is spread over 50 hectares of land managed by 100 women, backed by over 90 individual investors from the HerVest app. Residents see farming as a way of life, and farm exclusively, or combine it with white-collar jobs such as teaching or working in the civil service. The dirt-road leading into the farm is sometimes so narrow that tree branches wipe the car windows.

At the entrance, a large piece of tarpaulin is wrapped around a tree. On it is a picture of a cow, with a big red X across the animal. "This project site belongs to HerVest for Women Limited. No grazing/theft on this land," the poster warns.

Nearby, Abdulhakeem Salman, the project's Lead Agronomist, presses some cobs of maize, to check for grain density. His chats with farm labourers who were once his strongest opponents. "The first chemical (a herbicide) we use is applied before the plants shoot up," Salman explains as he winces at the gaps on a rogue cob. "But the service providers

(farmers) refused, telling me they have been farming before my parents were born. I told them they were right, but we would have to test this on a few hectares, because their investors cannot be disappointed."

After the farmers realised these practices were working, they were more open to innovative crop practices, and subsequent hands-on training. "It is normal for farmers to have this confrontational nature to unfamiliar agricultural practices. We just manage their reactions by showing them proof on the field," he adds.



Salman Abduljakeem checks the crop on the women's farm in Omu-Aran, Kwara, Nigeria.

Farm manager Oladipupo Bashir walks around the damp brown earth with a machete, hanging up stalks of maize that have fallen due to prolonged rain. He wants to prevent the cobs within from getting eaten by termites.

"We are in fear of the climate (change). Farmers here plant twice a year for maize, groundnut, beans, rice but things are changing now. When you expect rain to start, it won't start on time. When you are expecting there's going to be a break in the rain, it will not come, or the rain extends more. These are challenges making farming a little bit more difficult to calculate and estimate."

Apart from climate change, culture is a formidable challenge. "If you don't farm, you are toying with your existence. But many women have problems getting to the farm because this place is far away. For a woman to leave her husband, children to go and farm, even for two or three hours is going to be a serious challenge. She may have to take permission; at times the husband may have to be elsewhere. But knowing that there are buyers waiting for the crop, that these women are working as a group, will bring salt and sugar into the family, the husbands usually comply," Oladipupo adds.



How does the app reach rural women farmers?

Chibuike Alagboso, Advocacy Programme Manager, Nigeria

About 86% of all Nigerian women own mobile phones; most are feature phones or smartphones. However, low awareness and high data costs mean women often cannot use these phones to access the Internet. We therefore have a special USSD code, which does not need an Internet connection. They can type the code (*7213#) as a text message and follow the instructions in all official Nigerian languages. Thus, the farmers can open a HerVest savings account and perform basic financial transactions. They can access weather information and best farming practices and stay connected to the HerVest farmers network, all at low communication costs.

SoTape Akinpelu, Co-Founder, HerVest



One of the women who enjoys the full support of her husband is Lydia Ayanda; she thinks initiatives like HerVest could entice youth using the Internet to defraud victims, back into farming.

"They did not limit us as females. Even if we are going to use money to do (pay for) the labour aspect of it, we are now farming like men. Things like this will also make the young ones return to the farm and stop doing Yahoo (Internet scams)."



Most farmers travel from rural areas to sell their harvest along major roads, often at low prices.

Challenges From Farm to App

HerVest was founded in 2020, and has managed over \$750,000 worth of transactions. With a community of 25,000 users, the company works with more than 10,000 smallholder women farmers in Kwara, Benue, Oyo, Niger, Kaduna and Jos. Currently, the 15,000 active investors on the HerVest app are responsible for a combined \$253,000 in investments. Most prefer to invest in maize, rice and sorghum, says co-founder Solape Akinpelu.

Though HerVest has received support from notable sources including Google, and the United States Agency for International Development, the technology faces several hurdles. Retail investors have been spooked by a number of fraudulent players in recent years. Between 2016 to early 2020, agriculture-focused crowdfunding companies enjoyed a five-year boom across Nigeria, promising interest rates from 15% to figures as high as 60%. Then several of them crashed, leaving retail investors bankrupt, with some founders allegedly using funds to relocate outside the country. Nigeria's authorities clamped down with stricter regulations on individuals' investments.

HerVest is also operating in a sector routinely targeted by armed gangs of bandits. Farming can be life-threatening, with up to 352 farmers killed or kidnapped over 12 months, as recorded by Nigeria's Punch newspaper in 2022.

"These challenges do not scare me," says co-founder Akinpelu. She is rather focused on retaining investor confidence. "Finance anywhere in the world is a market built on trust, and we are never going to compromise on that. In appraising what funding is needed, we take into account the topography, test the soil, and still take comprehensive insurance to cover adverse climate conditions and even tonnage differences in the harvest," Akinpelu adds. Some of these steps lead to delays, for example when the war in Ukraine affected global fertilizer prices, HerVest had to readjust its contracts with farmers.

Nigeria's ambassador to Germany, Yusuf Tuggar, says HerVest is proof that "often, the risk that is discussed and anticipated in Africa or Nigeria varies from the risk that exists here in Germany, depending on the sector, the people involved and the opportunity itself."

He says that risks exist everywhere and recommends not shying away from doing business in Africa but rather to evaluate the risk and "ascertain how these risks are being mitigated because as we can see, just one player, though relatively new, is already reaching over 10,000 female farmers," he adds



Solape Akinpelu co-founded HerVest after over ten years' working in the financial services industry.

Production costs are also impacted by a situation where safety is an issue on rural farms; kidnappings and theft are a constant threat: "A lot of people are choosing not to even go to the farms because they are afraid, which is understandable. Before, farmers just plant and walk away. But these days? Once the plants are budding, we have to hire security just like how you

get security agents for human lives. You're now getting security agents for plants' lives. And so that causes a hike in prices and cost of food," Akinpelu explains.

Working with the community chiefs and neighbours has ensured there have been no thefts or security breaches, says farm manager Oladipupo Bashir. But some farmers like Olanrewaju Adesiyun go to work only when she is accompanied by her two teenage children: "it is better that way because they can also help me. When they are in school, we go only on weekends. We all use one okada (a commercial motorbike). We pay N1200 (€2.35), and the rider takes us to the farm."



How do you handle intermediaries who interfere in the marketing process of smallholder farm products?

Andreas Wesselmann, Director, AfricCrops, Germany

We aggregate buyers in advance. Know the amount of crops (the buyer) needs, go into the farm, and work with the women based on that. Also, we incentivize farmers. We incentivize through training on financial literacy—understanding interest rates on loans, or how to know when your crops are being underpriced (by intermediaries).

Also through health checks (paid for by HerVest). A lot of female farmers are not aware about their blood pressure, or if they are diabetic, so we go to the field. Because you need a healthy farmer to actually grow healthy crops for you. And they end up loyal because they know it goes beyond your transaction. Some of the training tips and information are also available through the USSD code (text message only) version of the HerVest app.

'Solape Akinpelu, Co-Founder, HerVest



Just like Germany?

Similar to Nigeria, traditional inheritance patterns and outdated gender norms affect female farmers in Germany. A study by the Thünen Institute of Farm Economics in Braunschweig, shows that only 11% of farm holdings are managed by women, the lowest rate in Europe. In Nigeria, women are five times less likely to own land than men, and only 11% of six million women smallholder farmers are engaged in land governance discussions. These are developments that Akinpelu closely follows: "I have found that female rural farmers have the same financial issues worldwide; limited access to land, credit facilities, farm input, training, technology, and crop insurance. However, mobile-based platforms like ours can bring access to customers, provide funding for mechanised processes, increase their income, and push them towards ownership."

Yusuf Tuggar, Nigeria's ambassador to Germany says financial technology (Fintech) initiatives like HerVest are possible because of Nigeria's inter-bank settlement system, which allows fluid transfers between licensed institutions. "This infrastructure, set up since 1994, is what allows the leapfrogging of fintech that we see today. I think Germany can learn some things from Africa regarding how financial instruments are being deconstructed to include sectors such as rural farming, and demographics such as retail investors."

Will male farmers also be included in HerVest's long-term plans? Co-founder Akinpelu immediately shakes her head no. To do so means no change will occur: "the gap we're solving for is a generational-long gap. So, we need to be laser focused on women who have been long excluded. Otherwise, the problem remains neutral. We can't afford to continue that way."

Meanwhile, HerVest is sticking with the women farmers, but also expanding to add another demographic that cannot access formal credit: fashion entrepreneurs.

"Currently, we have an investment in Fashion Entrepreneurs. Nigerian women (about 23 million) account for 41% of small businesses in Nigeria. Yet they receive less than 15% of conventional business loans. We're providing flexible loans and resources to female entrepreneurs to scale their businesses and achieve their financial goals," Akinpelu explains.

Gender Equality – How HerVest intervenes

- *In Nigeria, only 4.77% of women smallholder farmers can access agricultural insurance. HerVest covers insurance costs for over 10,000 farmers in six states.*

- ***Just 13.50% of Nigeria's smallholder women farmers can access buyers or markets for their crops. HerVest negotiates with companies to secure bulk buyers for farmers.***
- ***Through HerVest's app, farmers also get funding from thousands of retail investors, in a country where smallholder female farmers only access below 23% of existing credit facilities.***

Student Toyosi Mohammed is considering this next: "I want to invest in the vocational workers, and do so with the new dollar investment option, but that can only happen as soon as I lay my hands on money," she laughs. On the other hand, Olapeju Umah has no such plans. "I am sticking with the agriculture slots, because I want to see these women take on more capital intensive projects and more funding being made available to them."

Far away from the bustle of Lagos and her investors, the HerVest app is changing home life for some in rural Nigeria. Like Rufai Taiwo, a husband to one of the Kwara farmers, who says his marriage is even better: "I don't know much about the Internet side, but I notice that the way she goes and comes to the farm now, her demeanor and carriage are lighter than before. It's better than when it was just me working alone for the family to eat!"



Often, women farmers with no access to buyers display their goods openly.

On the highway leading back into Kwara's capital Ilorin, Nigeria's small scale female farmers frame the roads. Some sit next to wheelbarrows piled high with peppers. Others display rusty metal bowls of potatoes and vegetables flanked

by yam tubers. Sometimes, they take refuge from the heat under large umbrellas bent out of shape by the wind, their wares coloured brown by dust raised from passing cars.

It's a reality that Adesiyan feels she escaped.

"Although HerVest has so many instructions they asked us to follow, I was able to grow maize and sell it in large quantities." The women of Kwara sold their first maize crop with HerVest at N242,000 per tonne and rice at N310,000 per tonne, making an average profit of N200,000 on each hectare of land.

"I made almost double per hectare, compared to what I usually sell," Adesiyan adds.

"Without them I would have been running around looking for who will buy my small maize at lower prices just so it will not spoil. I hope more women invest in our crops, so we can plant more, and boost our economy."

The project was funded by the European Journalism Center, through the Solutions Journalism Accelerator program. This fund is supported by the Bill and Melinda Gates Foundation.

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