

Farmcrowdy: digital business model innovation for farming in Nigeria

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Introduction

It is 5:30 p.m. on the busy but chaotic roads in Victoria Island, Lagos, Nigeria (Figure 1). Onyeka Akumah, the CEO of Farmcrowdy, stopped behind a heavy loaded tanker waiting for the green light. He took a glance at the Guardian newspaper he had stowed in the car console in the morning. A headline caught his attention; 'PorkMoney Enter Agric Business with a "New Business Model"'. The essence of the short story was that several new startups are eyeing the lucrative agriculture space with versions of the business model that Farmcrowdy had pioneered. Although the threat of copycats has always been a topic for discussion in the small startup, no serious attention has been given to it. How can Farmcrowdy keep its market leadership in the agricultural sector with its business model? With the entry of other startups sharing similar business models, what new directions or improvements should be implemented for Farmcrowdy to remain competitive in the medium to long term? He wondered. Akumah made a mental note to discuss with his management team strategies to strengthen its business model to maintain its uniqueness and success going forward.

Akumah had an early interest in agriculture. He started his first business venture as a 12-year-old running a 200-chick poultry farm in Sokoto. In later years, he mulled over the challenges within the agriculture sector, especially those faced by small-scale farmers. Most small-scale farmers do not have the funds and skills to maximize revenue from their farming businesses and are running them on a subsistence basis. Indeed, most of these farmers have extra farmlands but do not have the finances to expand their farm operations. He had also observed, through casual conversation among his friends that middle-class Nigerians do have the resources and interest in agriculture, but unfortunately, they do not have the time, experience and skill to get involved in the sector.

Over the years, Akumah had acquired great experience in several companies using business models related to online technologies. He worked as the Chief Commercial Officer for Travelbeta.com; vice president of Konga.com; director of Jumia.com; and the unicorn of Africa online commerce. At Wakanow.com he was Online Marketing Manager. He was also E-Marketing Coordinator for Deloitte for West, East and Central Africa, and Webmaster for British Council in Nigeria. With such rich and wide-ranging experience and concern for the small-scale farmer, Akumah came up with the idea to create a system where farmers and people with financial resources could go into an arrangement with potential benefits to both parties. He shared the idea and vision with some friends, including Akindele Phillips (a co-founder and Chief Financial Officer) and Tope Omotolani (a co-founder and Chief Operating officer). With their support, Farmcrowdy was born as Nigeria's premier digital agricultural platform in November 2016.

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Disclaimer: The authors prepared this case as a basis for class discussions rather than to illustrate either effective or ineffective handling of management issues.

Figure 1 Cover page



Vision

Agriculture has relied on technology, in some form or other, for hundreds of years (Davies *et al.*, 2009). However, digital technology is fast becoming increasingly essential in facilitating productivity through various innovations (Nsehe, 2017). Farmcrowdy model represented a new way of getting investment and expertise into small-scale farming. It was the first of its kind, developed and implemented in Nigeria. Following the launch of this business model, Nigeria has seen the rise of other agro-technologically based firms like Porkmoney (Exhibit 1).

The name Farmcrowdy is a creative combination of the words “farmers” and “crowd”, denoting both groups working together. The vision is to improve the living conditions of small-scale farmers in Africa by involving everybody (Taiwo, 2018). Most countries in Africa have their largest occupations in agriculture. The company believes that this creative approach has the potential to solve the employment, food security and other economic and social problems on the continent.

Business model

Farmcrowdy built a startup community business model using their website and mobile app in Google Playstore and Apple App store. The platform is designed to bridge the gap between small-scale farmers and available investors. It hopes to connect middle to upper-class investors with over 38 million small-scale farmers in Nigeria (Nsehe, 2017). It is a network of collaboration among farmers, investors (called sponsors), off-takers and insurers. By providing a database of pre-qualified small-scale farmers who need financial and other support, the model allows Nigerians with interest to invest in agriculture to do so at the touch of a button. Potential investors download the Farmcrowdy mobile app to study push notifications once a farm is open for sponsorship. Sponsors invest in crop cycles with sponsorship starting from about N90,000.00 (£175). A crop cycle can be anything from 3-5 months for poultry and 9 months for cassava. Sponsors have two ways of engaging with the online platform by becoming a sponsor and if happy with their initial investment by encouraging others to join the platform.

At harvest, Farmcrowdy takes the product, sells it to off-takers and share the profit amongst farmers, sponsors and itself. The company pays the farmer 40 per cent of the profit from the sale of the produce, 40 per cent of the profit goes to the sponsor in addition to the original amount invested by the sponsor; Farmcrowdy takes the remaining 20 per cent of the profit.

The key function of Farmcrowdy under this model is to provide the appropriate conditions and mechanisms for the network of actors to work in such a way that under-utilized land in

farming communities are used to grow more food while ensuring that best farming practices are undertaken to keep soils fertile and productive. It therefore empowers local farmers by linking them to potential sources of finance and support. As Akumah explains:

We have identified that there are over 38 million small-scale farmers that are mostly unbanked and find it difficult to securing access loans that they need to expand their farming activities. Even when they get loans, many of them don't know the right market to sell their farm produce to earn a decent income from farming as a business. So, we set up Farmcrowdy to connect these individuals with sponsors who are excited about impacting the lives of the farmers. These sponsors also earn returns at harvest when the food cycle is completed.

As one interviewer concludes:

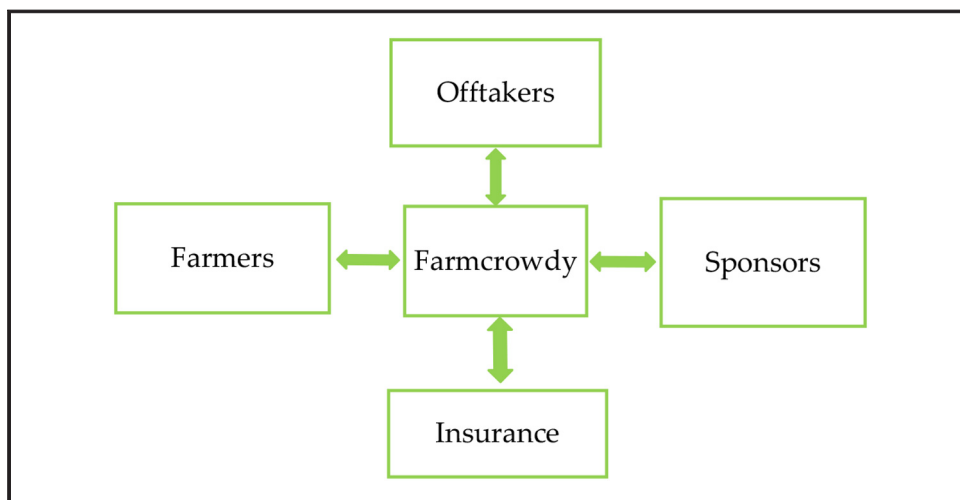
Farmcrowdy gives people opportunities to invest in agriculture without getting their hands dirty; it gives ease of convenience and opportunity for people to participate in Agric platforms with their great business sense; their values include openness and transparency with a great sense of customer satisfaction; they make investment in the farm business interesting as they have launched an app where their customers and investors can interact without their physical presence (Farmcrowdy, 2018).

This model is depicted in Figure 2 showing Farmcrowdy as the orchestrator and manager of the network of actors.

Actor 1: farmers

Due to challenges like climate change, lack of startup capital, poor pricing, pest infestation, and government inaction, many individuals are opting out of agricultural business in Nigeria, thereby posing human, food security and employment threats in the nation. Small-scale farmers are the worst affected by these challenges as their livelihoods largely depend on agriculture. These farmers constitute over 90 per cent of players in the crop production segment of the industry (Taiwo, 2018). Farmcrowdy focused on small-scale farmers in rural Nigeria. The key challenges of these farmers include lack of access to loans to expand their farming operations; limited knowledge in the efficient use of farm inputs; poor quality produce; and lack of markets for selling their produce at decent prices after harvest (Nsehe, 2017).

Figure 2 Farmcrowdy business model



In selecting farmers for the platform, Farmcrowdy considered a number of factors. These include the number of years of experience in farming. Studies have suggested that the number of years of farming experience largely influences farm productivity ([Barkai and Levhari, 1973](#)). Further, the quality of the farmland is a critical factor. Farmcrowdy visits individual farms to run soil and other productivity tests on the land to be sure the land can support the type of farming intended. Size of the land is also a key factor, as farmers must have extra land to offer opportunities for future expansion of their operations. Farmlands must also have the appropriate documentation regarding ownership. Farmcrowdy conducts due diligence regarding the history and ownership of the farmland to ensure there were no family disputes or litigation and other encumbrances on the land. In addition to these factors, a farmer must also have a good reputation and character in the community. To ensure that the right farmers are selected, Farmcrowdy adopted the group model of selection. As Akumah explains:

We looked at crop-growing areas and looked for farmer-ambassadors there. They would then introduce us to co-operatives or farmers' associations who in turn would introduce us to farmers in the categories we're looking for [...]. The community leaders identify the farmers and vouch for them. The pool of farmers takes responsibility for individual farmers. We look for passionate farmers who in turn recommend other farmers (like them).

The selected farmers receive no direct funds per this business model. Farmcrowdy uses the funds from sponsors to procure seeds, herbicides, fertilizers, and farm labor for planting and harvesting for the farmers. Technical field specialists who are qualified agronomists also provide farmers with free agricultural extension services on-ground advice from specialists, training in best farm practices for different types of crops and production methods. Farmcrowdy coordinators provide sponsor forums for companies who want to engage with the sponsored farmers. For example, the technical specialist might work with a fertilizer company to help improve farm yields. The companies cannot work with individual farmers directly but can work with groups of farmers. Farmcrowdy is responsible for selling produce (creating market access) to major processors at agreed contract values. Farmers cannot decide to hold on to the produce.

Actor 2: sponsors

A sponsor is anyone with interest and the means to invest an amount of money to support a farmer on the platform. These generally are individuals with a strong interest in agriculture but lack the time and skill to enter into farming. Prior to Farmcrowdy, these potential investors had no access to qualified farmers to invest in, no knowledge of the credit-worthiness of farmers; and indeed, no way of knowing whether individual farmers would be a good investment ([Innovation in Africa, 2018](#)). Investors could also sponsor any farm of their choice such as poultry (Broilers), Maize, Cassava, Rice and Tomato. The sponsor signs onto the platform and checks out the farming initiatives; the number or size of the farm they wish to invest in. Farmcrowdy runs background checks on the sponsors using their profile details given on the platform. When the sponsor meets the requirements, the farmer is engaged for the entire farming cycle. After making the right payment, the farmer is immediately notified of the sponsorship. It is claimed that this model provides promising returns after harvest to its sponsors. Sponsors are likely to receive between 6 and 25 per cent returns on the sponsorship amount.

To boost their confidence in the model, sponsors receive bi-weekly updates about the farm's progress including pictures and videos. Sponsors are encouraged and assisted to visit their sponsored farms at any point in time to learn about the farmer, the farm operations and produce. According to a co-founder, the key benefit of this business is that investors have the chance to farm from their pocket in the comfort of their offices or homes.

Actor 3: off-takers

Off-takers are companies that commit to a contract to purchase the farm produce from sponsored farmers after harvest. Farmcrowdy engages off-takers before and after each cropping cycle. Off-takers often make suggestions to farmers and field experts on crops that are in demand on the market for each crop cycle. Off-takers offer pre-agreed prices with Farmcrowdy, usually in a range acceptable to both farmers and off-takers. This allows Farmcrowdy to be able to determine the potential returns on the sponsor's investment. However, farmers who wish to make more money may hold on to sell at a better price after the glut season. Farmers are encouraged to recommend faithful individuals they have worked with in the past to qualify as off-takers.

Actor 4: insurance companies

The last actor in the business model is insurance companies. Farming involves significant risks; from unpredictable events like weather, biological factors (like the incidence of fall-army worm infestation that attack farms in Nigeria), available labor, and fluctuations in market prices (TechCabai, 2018). Farmcrowdy takes on agro-insurance policies to insure its poultry birds and crops in the event of unforeseen circumstances. Their insurance with Leadway Assurance covers farm infrastructure and farmers and sponsor's capital. Their subscription to the Leadway Poultry Insurance policy covers liability of poultry farmer or investors in the event of the death of birds caused directly by fire, floods, windstorm, lightning, accident or disease (leadway, 2018). The Leadway Multiperil Crop Insurance Policy insures farms against the risk of physical loss or damages to crops which may arise from fire, lightning, flood, explosion and other covered perils. Upon the occurrence of any of such accident, the policy pays for the production costs of the crops lost from planting to the crops maturity stage (leadway, 2018).

Achievements

So far, Farmcrowdy has sponsored 16,000 farm units with the help of 35,009 sponsors (as at 2017). As of 2017, the platform has engaged 11,124 farmers across eight Nigerian states. These farmers have been able to produce more than 311,000 broiler birds with a mortality rate of less than 4 per cent, over 5,000 acres of maize have been cultivated by over 2,000 new farmers, 2,500 acres of rice has been cultivated by over 1,000 new farmers and 80 farmers have cultivated over 529 acres of cassava farms (AppAfrica, 2019).

Confidence in the Farmcrowdy business model among investors, farmers, sponsors and the media is growing. In December 2017, Farmcrowdy closed a \$1m seed investment round from Cox Enterprises, TechStars Ventures, Social Capital, Hallett Capital and Right-Side Capital; as well as angel investors Tyler Scriven, Michael Cohn, Josephine Group, FC Agro Allied SPV and Dr Christof Walter (Innovation in Africa, 2018).

Testimonials from farmers are positive. Olumidae Dada, a farmer, has this to say about the business model:

Farmcrowdy provides a bridge to funds and resources farmers need. It has given us the opportunity to stay occupied and to have something doing rather than being idle. I want to say to other farmers who are yet to come on board [to do so] and enjoy the facilities I am enjoying.

Dayo Adeoye, another farmer, shared his experience about Farmcrowdy, saying:

Farmcrowdy is a welcome development. They are filling a gap conveniently and helping farmers to do more beyond their capacity. Farmcrowdy has made things easy for farmers and has helped increase our production by 50%. I like their flexibility, transparency and integrity. They are also open to feedback and make necessary changes. I am already recommending Farmcrowdy to people and I will continue to do so.

In concert with the views of farmers, sponsors see great value in the Farmcrowdy business model. For example, in Bukola Dosumu view:

Farmcrowdy is unique because of convenience and opportunity to participate in Agric platforms. It is a great initiative and I would recommend it because of the great business sense.

In the experiences of Adeyeye Martins Oluwafemi and Dr Anthony Oyekunle,

It's easy to sponsor a farm and the bi-weekly update is very good on the sponsored farm. Being the first in Nigeria, Farmcrowdy will grow and reduce food importation and famine in Nigeria. The idea behind Farmcrowdy is quite good. It has the potential to create jobs for lots of people. It is very easy to do business with them because everything takes place online. I would recommend them to others.

The media has also taken notice of Farmcrowdy. The startup has been selected as the "Companies to Inspire Africa in 2019" by the London Stock Exchange. In the same year, Akumah was adjudged the one of the "100 Most Influential Young Persons in West Africa Under 40 years" by the Confederation of West African Youths in the sub-region. The startup was adjudged the winner of the Digital Business of the Year 2018 awards by the Global African Business Awards. In 2018, Farmcrowdy was selected as the National Productivity Order of Merit by the Federal Government of Nigeria. The company was nominated as one of the top 25 innovative businesses by BusinessDay Newspaper in 2017. It has also won the award for Agro-Innovator of the Year 2017 at the Nigeria Agriculture Awards. Farmcrowdy joined the International Institute for Tropical Agriculture (IITA) as a National Youth Corps Member in 2017. They have since helped the youth with practical entrepreneurial skills training in agriculture to increase job creation in Nigeria.

Key challenges

Like any new business venture, Farmcrowdy is faced with several challenges. One of these is trust among investors and farmers – as the model is largely built on trust. According to one co-founder, because of past experiences in Nigeria regarding fraud cases, trust has become an issue of concern as explained in this narration:

Some investors raise trust issues due to their past experiences with technological schemes they subscribed to. This leads to mounting undue pressure and interference with farmers operations on the farm. Also, sometimes off-takers fail to fulfil their part of the agreement at short notice. This constrains the company in looking for new buyers for the farm produce, making payment to the investors and farmers at the agreed time a challenge.

Farmcrowdy addressed this challenge by employing experts with finance, agriculture and law backgrounds to undertake background checks and periodic review of records of investors, farmers and off-takers. They ensure that these actors have signed a binding contract with the company to serve as a deterrent on them renegeing on their part of the agreement.

In addressing farmers' trust, Farmcrowdy visit community leaders such as chiefs and local authority administrators to educate them on the company's business model. Their views are sourced on how to revise the model under context-specific instances. Their approval helped build trust to get suitable farmer groups to subscribe to the platform ([Okobi and Aliogo, 2017](#)).

Other challenges include building and updating the technological base of the platform to allow for better understanding of investors and to prevent fraud through hacking, impersonation and theft. Raising funds in a timely fashion, to secure lands, logistics for regular farm visits, provision and maintenance of timely agricultural extension services are other challenges as is introducing farmers to smart technologies and new farming techniques.

Going forward

Farmcrowdy future plans over the next few years are two-fold:

1. to expand within the huge Nigerian agricultural sector; and
2. to look at opportunities in countries outside of Nigeria.

Omotolani, a co-founder articulates this strategy as follows:

Agriculture is a very interesting space. There are 8 million small-scale farmers in Nigeria. So, we want to be working with more farmers and fine-tuning the business model. At present, it's a country model. It's Nigerians sponsoring Nigerian farmers so that Nigerians can eat. But by the end of 2018 and 2019, we have eyes on Kenya, Ghana and Uganda. We want to see whether the same process will work in other countries ([Innovation in Africa, 2018](#)).

With the current challenges and operations of new competitors in the agro-technological industry, Akumah wondered how Farmcrowdy will meet his twin strategic goals. The attainment of this feat will require Farmcrowdy improving their business model. This can be done by the addition of novel activities to the business model. Secondly, they can change one or more parties that perform the business model activities. Finally, they can link business model activities in new ways like, the development of model farms as a training ground for new farmers. In addition, the development of a go-back-to nature campaign to end-users of the products from farms.

Keywords:
Innovation,
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Exhibit 1. Key competitor

Company: PorkMoney

Competitor Product Summary: They are a Pig-Farming Platform that operates in Ghana and Nigeria. They allow individuals to partner with them and enjoy the benefits of owning a pig farm while going about their normal work without their physical presence on the farm. They handle the rearing, breeding, and feeding of pigs, from piglet to hog/sow, ensuring they grow to their maximum weight, to achieve maximum returns for their partners.

Competitor Strength and Weaknesses: They have an objective of welcoming financial partnership from any interested persons around the world. This allows for an all-inclusive system where technology savviness is not a pre-requisite to getting investments across. However, there is no background checks conducted on individuals before they can become financial partners to PorkMoney. PorkMoney has a team of well-trained veterinary officers that provide professional health services to the pigs. This helps reduce the mortality rates of farm animals. The minimum amount of investment one can make in PorkMoney is 250,000 Naira. This is relatively high compared to 90,000 Naira minimum investment amount from Farmcrowdy. A weakness that can be associated with this model is the limited access partners have to the farms. Partners who make such requests will have to be added and informed when they can have a tour of the place. The systems put in place do not allow partners to obtain regular updates from the farm. This may affect investor confidence. PorkMoney has a retail brand called Porkoyum where they sell processed pork as bacon and sausages. Partners can only receive their returns on investments when all the stock is sold out to customers. With this model, PorkMoney cannot assure its customers of a fixed return on investment.

Strategies Used to Achieve Objectives: Individuals become partners by choosing a PorkMoney partner plan that funds the purchase of pigs and feed for their growth. PorkMoney then does all the work. Their team of expert farm handlers caters for the healthy rearing and growth of the pigs. At maturity, the pigs are chopped, processed, packaged and sold to wholesalers and retailers. Investors are able to receive high returns on their capital. This can be between 15 and 30 per cent returns in 11 months based on the capital invested.

Market Outlook: they anticipate creating wealth for their financial partners through pig farming across the globe (Brandspurg, 2018).

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