

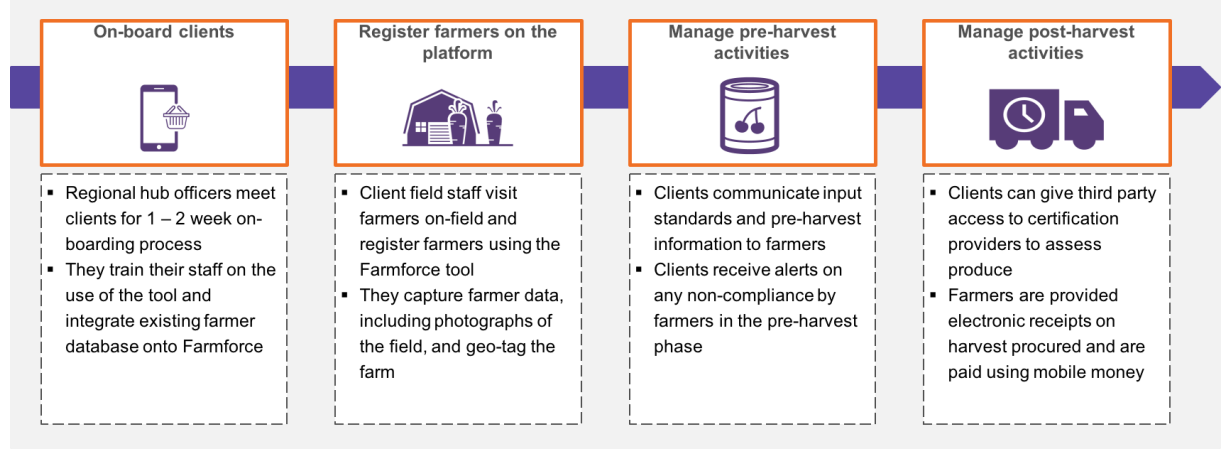
## CASE STUDY: FARMFORCE



**Founding year:** 2012  
**HQ:** Guatemala, Kenya, Thailand  
**Countries of operation :**  
 25 countries across Latin America, Africa , and Asia  
**Orientation:** Currently in the process of converting to for-profit  
**Employees:** 12  
**Turnover:** Not disclosed

Smallholder farmers in developing countries face a multitude of challenges right from planting all the way up to selling end produce. Small land holdings, limited knowledge on quality agricultural inputs, and lack of access to finance result in low yields and limited bargaining power. Added to these challenges, information asymmetries linked to price information, government policies, global certification standards, and knowledge on profitable markets make it even more difficult for farmers to move away from subsistence farming and realize higher prices for their produce. Aggregators and export companies, who could potentially provide increased incomes to farmers by helping them surpass middlemen, are reluctant to work with these farmers owing to lack of traceability and quality assurance data across the value-chain.

Farmforce is a cloud-based traceability software application that enables agribusinesses working with smallholder farmers on a contract basis to efficiently manage backward and forward linkages across the agriculture value chain. Stakeholders on the platform include farmers, exporters, processors, certification providers and financiers. The enterprise has reached over 150,000 farmers till date.



### Operating Model

Farmforce is a web and mobile based platform solution for agricultural businesses, aggregators, exporters and agricultural processors to manage relationships with smallholder farmers. Farmforce is active in 25 developing countries across Latin America, Africa and Asia for a variety of crops, such as horticulture, cereals, coffee, cocoa and works with more than 150,000 smallholder farmers. International markets require compliance with food safety standards and transparency in quality of inputs used in production. Small-scale famers lack the resources or the information to adhere to these strict norms and thereby lose out on the opportunity to sell to global markets. On the other hand, agribusinesses that work with large numbers of smallholder farmers rely on paper records and frequent on-field farmer interaction to manage contract farming operations, making it an expensive and time-intensive process.

The Farmforce platform enables digitizing contract farming and out-grower schemes, thereby increasing efficiencies in smallholder farmer management and expanding opportunities for these farmers to be part of global formal markets. Once the tool is sold to clients, Farmforce representatives from the respective regional hub meet with client staff either in person or over online media. Clients undertake a one-week onboarding training where Farmforce agents assess client requirements, train the client users on the tool’s communication and data management

Farmforce enables agribusinesses to track compliance to pre-harvest protocols in line with global certification standards.

features, and integrate the client's existing farmer database on to the Farmforce platform. The enterprise also operates an online support centre to address any client issues via screen sharing and video calls.

Clients use Farmforce to gather data on farmers, and their locations using geo-referencing and Google Maps. In addition, they can record information on type of crops grown, soil fertility, quality of fertilizers and other inputs used. During the pre-harvest phase, farmers can communicate with field agents on the farming protocols. Field agents can verify the inputs used by farmers in line with certification standards, inspect the crops and forecast yields. Farmforce's photo capture and GPS features also enable companies to ensure that their extension officers and field agents are monitoring the farmers on a regular basis.<sup>1</sup> The tool's finance monitoring feature allows companies to interact with finance providers and manage input loans and cash advances made to farmers. The platform stores information on the farmer's loan history and send SMS reminders to farmers for outstanding loans. In addition, certification bodies on the platform assess the quality of inputs used and compliance to food safety standards prior to awarding certifications such as the Good Agricultural Practices (GAP). The tool's strong association with certification providers also enables real-time communication to farmers on changes in certification standards or regulatory policy that may impact the production process.

Farmforce offers a transparent harvest procurement mechanism wherein the tool is linked to digital weighing scales and a Bluetooth printer at collection centres. The produce is weighed using these scales and an electronic receipt is printed and given to farmers for their records. The receipts include information on the quantities delivered by farmers, traceability data and produce prices. The tool allows automatic deduction of outstanding input loans from harvest sales. Companies use mobile money platforms or electronic bank transfers to pay individual farmers.

### Financial Sustainability

The software-as-a-service was developed by Syngenta Foundation for Sustainable Agriculture, a non-profit organization and was co-funded by the State Secretariat for Economic Affairs of Switzerland.<sup>2</sup> Initially established as a project, Farmforce is currently in the process of being converted to a for-profit enterprise.

Farmforce earns its revenues by sale of licenses to a variety of agricultural stakeholders including exporters, processors, and co-operatives to use its web and mobile platform. Clients can further extend the license to other third party stakeholders such as agronomists, trainers, input providers, certification bodies and financial institutions for a fee paid to Farmforce. Smallholder farmers are not required to pay for the tool. Revenue streams include subscription fees, set up fees and fees for customizations required by the client. Prices may vary based on the features, functionalities and suite of languages desired by the client and the number of devices required by the client. Packages could differ by the modules requested by the client, such as basic farming module, SMS communication, compliance functionalities and other sophisticated tracking features.

The enterprise incurs significant costs in developing and maintaining its software platform. Initial upfront costs involved in designing the technology and user interface represented almost 100 percent of the total costs. Over the 4 years of operation, this cost has been brought down to less than 50 percent of the total costs. Maintenance and continuous development of the platform,

---

<sup>1</sup> Technological Innovation for Inclusive Agribusiness: How can ICT innovations be leveraged to address value chain challenges? Insights from the Kenya Workshop Report, Business Call to Action, 2015

<sup>2</sup> Grow Africa Smallholder Working Group Briefing Paper: Information and Communication Technology

salaries paid to local support staff and marketing and business development activities in customer acquisition represent other major operational costs incurred by Farmforce.

The tool is built taking into consideration a large variety of crops thereby creating a generic tool that can be customized for individual client at an additional fee; this helps decrease costs for development of the tool. The tool is also designed for use in different languages - English, Spanish, Portuguese, French, Vietnamese, Chinese, Thai, Turkish, Hindi, Bahasa Indonesia, which helps in increasing sales to companies managing smallholder farmers across different geographies. In order to strengthen financial sustainability, Farmforce is seeking long-term franchisee partners for resale of its tool. It currently partners with a leading supplier of software for the Agricultural Industry in Southern Africa which undertakes marketing and sales of Farmforce tools and pays Farmforce a commission.

## Impact

Farmforce's tool has a dual impact on smallholder and marginal farmers: one, by helping agribusinesses in streamlining their smallholder farmer management processes, it indirectly helps farmers in growing quality produce and reaching formal markets and two, in improving technical support and transparency in harvest procurement. The system enables effective monitoring of adherence to food-safety and sustainability standards, which eventually translate to higher produce prices for the farmers.

Farmforce increases market access for smallholder farmers on the one hand, and minimizes risks for agribusinesses procuring from small-scale farmers on the other.

The increased use of data allows exporters to estimate yields and advise farmers on production planning and appropriate inputs, and on the other hand enables financiers to provide input loans in accordance to quality assessment of risk. The use of ICT in monitoring field activities allows extension workers to provide more targeted advice to farmers at the right time. The ability to link multiple stakeholders on one platform increases communication flow and traceability at every point of the value-chain. This results in minimizing any leakages between planting and sale of the produce.

## Challenges and Lessons

Given the geographies that Farmforce operates in, most clients and target customers have limited experience with using technology in farmer management. Many of these companies are risk-averse to digitizing records and prefer to interact with farmers using a high touch engagement model. Therefore, Farmforce invests significant time in demonstrating the value of the tool in tracking farmer compliance to food-safety certifications and the potential for cost savings in monitoring remotely located dispersed farmers using mobile technology vis-à-vis on-ground management.