

Advice on beans

Farmerline's Mergdata farm-advice service in Ghana

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CTA Technical Brief



The project

Project holder Farmerline Limited, <http://farmerline.co/>

Application Mergdata (weather, farming tips, prices)

CTA project Apps4Ag Learning Opportunities

Location Ghana

Clients Smallholder farmers, agribusinesses, NGOs

Topic Training farmers how to use mobile information services

Project description Farmerline provides users with farm advice, weather forecasts, market information and financial tips via voice messages on mobile phones in local languages. The same software allows organizations to conduct surveys of farms and farmers. A series of training courses taught users how it works.

BENEDICTA BOYOU COULD do with some decent advice about her soybeans. She needs to know when the rainy season is expected to start so she can get the seeds in the ground at the right time. The growing season is short in the Upper West region of Ghana, and the rains do not seem to follow a regular calendar. If she plants too early, they will not germinate; if she plants too late, she may miss the season altogether. When the crop is growing, what should she do to fight the pests that gnaw the plants, or the weeds that threaten to strangle them? And after harvest, where is a good place to sell them, and what kind of price can she expect?

It is a lot easier for men in her village to get the information they need. They are more mobile, and more likely to see one of the few extension staff around. But like many female farmers, Benedicta is at a disadvantage: she is less likely to be invited to extension meetings or training courses, and finds it hard to get credit and other services.

Mobiles, the solution?

Mobile phones offer a solution for Benedicta and millions of other farmers, both women and men. By providing information directly to farmers, they can overcome the shortage of extension staff (Ghana has only one for every 2,000 farmers, and most of those are men),

Benedicta now uses the Farmerline mobile app



a lack of training courses, long distances and rutted rural roads.

Farmerline is one of the companies that has produced an app with the answers that Benedicta needs. Farmerline's program is called Mergdata: it provides weather forecasts, information on good agricultural practices, market price information and financial tips. The app works on a basic mobile phone and uses the local language.

Getting information to Benedicta's phone is easy – but how to get Benedicta to use it? She has to learn about the Mergdata app and understand how to use it, how to sign up for messages, and how to interpret them when

they arrive. For many mobile information providers, this is the biggest challenge they face.

Farmerline approached the ACP-EU Technical Centre for Agricultural and Rural Co-operation (CTA) for help. As a result, the company organised a series of 20 workshops in seven of Ghana's ten regions for users and potential users of the Mergdata service. The workshops trained nearly 540 people (including 109 women in the Upper West region) how to use the service. The participants included smallholders and fish farmers, along with extension workers, information system managers and monitoring and evaluation staff.

These workshops aimed not only to show this particular group of participants how to use the app and to get them to use it but also to create a critical mass of people who would tell their friends and neighbours about the service. Such word-of-mouth communication is still key to getting people to adopt any innovation. Some of the extension workers who took part in the workshops are doing exactly this: they have started teaching farmers how to use the Mergdata service and encourage them to sign up for it. The training materials developed for the workshops have become a useful resource for training new clients.

The workshops are not the only way that Farmerline promotes its services. It broadcasts market prices through local radio stations – a useful service that raises awareness about the company's main offerings. Staff attend meetings of farmers' associations and producers' forums. They take part in seminars and conferences, and do demonstrations for agribusinesses. Farmerline distributes flyers with information about its services, including a code that farmers can dial on their mobile to subscribe to Mergdata. It is developing a network of community agents to explain its services and help farmers get registered.

Adapt your service to your audience

The potential audience for the Mergdata app is huge. Three-quarters of Africa's farmers have a mobile phone, and in Ghana, 60% of the workforce is involved in agriculture – in production, processing or services or one sort

or another. In northern Ghana, 80% of the population are small-scale farmers. Other potential users of Mergdata include NGOs and companies that provide farm services.

Despite advances in education over recent years, many of the core audience have little or no education and speak only their own language. Farmerline originally developed the app to deliver information to farmers via SMS. But it quickly realised that this would not work: the majority of the target group were illiterate. So it added an audio option, where messages are delivered as voice recordings in various languages. That meant not only adapting the software but also adding translation and studio recording capabilities to the Farmerline office.

A phone in the hand...

Mobile phones can be used not only to receive information, but also to send it. Farmerline's clients asked it to add a component that would enable them to collect data in the field. This component enables users to create surveys and to gather information such as survey responses, images, audio and global positioning data (to mark locations and measure field sizes). The module works in both online and offline modes, making it suitable for collecting data in remote places. A web interface allows analysts to generate reports and perform statistical analysis on their data. This survey capability is useful for NGOs, agribusinesses, food buyers, research organisations and project managers.

... is worth a lot in the bush

More than 7,000 smallholders and fish farmers get agricultural information through Farmerline. Fish farmers learned better feeding practices, so were able to boost their output. Fish prices rose by 44% because the farmers were better informed of market prices and could negotiate better deals.

As a result of the CTA-supported series of workshops, Farmerline partnered with Mennonite Economic Development Associates (MEDA), a development NGO, on the Greater Rural Opportunities for Women (GROW) project in the Upper West region

Most farmers in Ghana have a mobile, but not the most recent smartphone. Farmerline's software will work even on basic phones.



of Ghana. It trained another 404 women farmers who grow soybean to join the 109 already trained as part of the earlier CTA-supported workshops. Each of these passes on the Farmerline information to a group of 25 other farmers they lead. In this way, Farmerline's information reaches 12,875 indirect beneficiaries. Farmerline also trained 21 project officers on how to register more farmers in the areas they serve. The women farmers have seen their yields more than double, from two or three bags, to six.

A combination of information types made this possible. Weather information and crop-growing tips help farmers make better decisions. Updated market prices and financial advice helps them earn more and manage their money better – for example by investing them in savings and loans associations.

Fee for service

Farmerline developed its technology in-house. The development team includes specialists in software development, agriculture, rural economics, natural resources management, accounting and policy management.

The services are subscription-based. Farmers pay a seasonal subscription to get the information services, and organizations pay a fee to use the communication and data-collection components. In some projects,

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the implementing organisation pays for the farmers to use the service for an initial period; the farmers then start paying for themselves.

Farmerline also offers subscription packages for organizations that wish to use the software on its own. In such instances, it trains the organizations how to use the platform for their projects. It can also manage projects on a client's behalf.

The software can be adapted to work anywhere – and not just in Africa. It allows voice communication in any language, so can be used where written communication may be a hindrance – as with illiterates. It is an affordable and highly integrated platform: it combines services for farmers with data-

collection capabilities. It allows businesses and agriculture organizations to better manage their staff and beneficiaries, reducing the cost of communication and data collection when compared to traditional techniques. Such organisations now use Mergdata to manage information on over 200,000 smallholders and supply chains in five countries: Cameroon, Ghana, Malawi, Nigeria and Sierra Leone.

Farmerline aims to expand its services so it can reach more farmers in more countries. To do this, it will need support in improving and scaling its distribution channels, “patient” capital to cover the upfront costs of reaching farmers in remote areas, and assistance with performing a credible, rigorous impact assessment.

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