

A FARMER'S SAY >
By Michael J. Ssali

The risks in farming

Uganda is an agricultural country and time and again our leaders encourage the youth to take up farming as a form of employment.

However, it is important for everyone choosing to become a farmer to clearly understand that farming, like many other businesses, is an occupation surrounded by risks and uncertainties.

It is an open-air business—the type that in Kenya would be referred to as "jua kali"—and vulnerable to the ravages of weather such as drought, floods and rainstorms, among other disasters.

Farmers worry about pests and crop diseases, unstable markets for their products, fluctuating prices, storage and transport of their perishable produce, competition from other producers and a whole range of other issues.

Unforeseen circumstances

People leaving salaried employment to become farmers must adjust to a lifestyle in which money is not earned at every end of the month.

Most cash crops are harvested once or twice every year and even when they are harvested there is no guarantee that they will be bought right away.

This means that a farmer sometimes has to wait for long periods before earning money. Often, due to calamities like drought or rainstorm, the farmer may lose the entire harvest.

Some agricultural products like vegetables and milk may be sold on a daily basis. But, the farmer must remember that, often due to unforeseen factors, there is a divergence between anticipated production and actual production.

No guarantee

During some periods of the year, the farm may not produce as much milk or vegetables as was anticipated. This means there is no guarantee of regular and uniform commensurate income all the time for the farmer.

During some periods of the year, the farmer may not earn enough money to buy farm inputs and to pay workers' wages. It calls for strong financial discipline.

Farmers must always think twice before they spend money on any luxuries. When a farmer gets paid, it is important to save money for use when the harvest is poor.

There also ought to be more money saved for buying seed and fertilisers even when the previous harvest was poor.

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App that helps farmers manage livestock

Livestock farmers face several challenges which affect their productivity. With a phone-enabled technology, they can be able to overcome some of those challenges, writes **Godfrey Lugaaju**

After losing all his rabbits from which he raised money that saw him through school, Ronald Katamba was inspired to seek not only a method to curb livestock theft, but also to monitor the animals and birds on farm.

It is how he came to develop an application that does exactly that.

"This is where I came in as an Information Technology (IT) expert. In early 2013, I developed software that would help people manage their herds and detect diseases, which attack their cattle and hinder the quality of meat and quantity of milk production," he says.

"I designed the application (known as Jaguza) to help these farmers maximise profits from livestock farming through using it to minimise the problems that affect productivity."

Katamba adds that it was not easy but he learnt from his experience that with livestock including goats, sheep, cows, rabbits and chicken, one can thrive.

What the app does

The device can be used to detect illness in animals within a period of 48 hours so that the farmer can take precautions to avoid losses and possible spread of the disease.

"The device is inserted or attached on the leg or the animal's ear," Katamba explains.

The device sends data via a wireless transceiver and uploads it to a central system, where it is compiled and made available via the Internet.

2013

THE YEAR IN WHICH THE APP WAS DEVELOPED

Developed with algorithms that use combinations of the indicators to create alerts to the farmer to locate and inspect a particular animal for sickness and theft.

The system has ability to track, trace and monitor the health condition of individual animals in real time.

"Jaguza is also a self service app with modules that provide information on gestation and insemination, weather, market, the nearest vet doctors and much more. A farmer can choose a module that suits his or her needs," he adds.

Experiences from users

Josephine Nankya, who has been using the app for the last 10 months, says it helped boost the value of her animals on the market.

"Before using Jaguza, buyers would offer me less money for my animals. When I embraced it, I learnt how to improve their productivity and I also get the best offers for my livestock from this platform," she says.

Tom Kabiito, who is also a farmer in Mukono, says the app defended him from the theft of animals, which had become rampant on his farm.

"I lost a total of eight goats in 2014 on my farm, some disappeared for good and the others I would find other people's grazing lands," he says.

"Jaguza has greatly helped me keep track of my animals at all time and the extensive knowledge it offers on farming is also impressive."

How it works



Jaguza Livestock App is used to monitor animals and diagnose early stages of diseases using sensor technology, among others.

It can locate the whereabouts in a given geographical area. When an animal moves out of range, a notification is sent to a solar powered receiver (SPR) from the device. The SPR sends this information to a cloud server, which in turn sends information to a computer or mobile phone.

With an offline integrated information management system, a district veterinary officer can help farmers in his or her area in case of outbreak and also manage and control farmers both online and offline.

Geographical Information Systems (GIS) enable the system for mapping livestock farmer and also control of diseases in the district in real time.

With web and mobile platform for helping farmer to accessing market between the buyer and the seller.

Record keeping has been the biggest problem to the farmers especially in rural areas. Now, the farmers can have access to record their sales and this app helps them in their productivity.

One does not necessarily need to own a smartphone to access the services the app avails. It works even on the ordinary phones through SMS and USSD.

"I made the app as user friendly as possible since mobile phone penetration in rural areas is good though Internet accessibility is low," says the app developer Ronald Katamba. "I am grateful to UCC, Ministry of ICT, NITA-U and UNCST for supporting the innovation and providing a platform for farmers to enjoy the benefits of the app."



Above, a herdsman cattle to graze. A phone-enabled software helps such farmers to monitor their livestock efficiently. FILE PHOTO

trending now> CASSAVA: A DEPENDABLE CROP WITH MANY USES

Cassava is an important staple food for many people in Uganda especially in the north and eastern parts of the country.

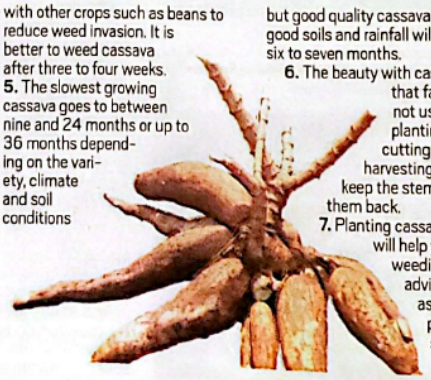
1. There are different types of cassava; they differ in softness, sweetness, maturity period, vulnerability to pests and diseases, and tuber yields.

2. Cassava will need optimum temperatures ranging from 25°C-30°C and a minimum temperature of 18°C. Where the temperature is above 30°C, the cassava is most likely to give poor yields.

3. Cassava is the only crop that can tolerate poor soils though very infertile soil can as well lead to poor yields.

4. Cassava would better be planted with other crops such as beans to reduce weed invasion. It is better to weed cassava after three to four weeks.

5. The slowest growing cassava goes to between nine and 24 months or up to 36 months depending on the variety, climate and soil conditions but good quality cassava that has good soils and rainfall will mature at six to seven months.



6. The beauty with cassava is that farmers do not use seeds in planting but use cuttings. So after harvesting, you just keep the stems and plant them back.

7. Planting cassava in rows will help you during weeding. It is also advisable that as you are planting, slant the cuttings in the hole of not more than 5cm.

8. Figues from National Agricultural Research Organisation (Naro) shows that cassava production in Uganda has increased from six million tonnes to 11.3 million tonnes per year.

9. Many things are developed from cassava. Among these are: Flour, adhesive, ethanol, animal feed, starch for sizing paper and textiles, and ingredients in industrial processes.

10. Cassava is believed to have originated from Brazil and Paraguay, but the varieties have spread throughout tropical areas of South and Central America and Africa over time.

-Zuurah Karungi

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