



USAID
FROM THE AMERICAN PEOPLE

ABGC Thematic Workshop ICT in Conservation

Examples in Agriculture

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AFR/SD/EGEA**

#1: Caveats and Introduction

- Much experimentation, few big successes.
 - ***Few today sustainable, scalable***
- Danger of “development legends”, award winners.
- Consider your full ICT Toolbox.
- ICT for extension – and beyond.



The 2-Pronged AG Extension Problem

Too few farmers have access to the extension services they need.

Extension workers cannot easily tap all the information available to help farmers.

Why ICT for USAID in Sub Saharan Africa work?

- **ICT offers a set of powerful tools to enhance the impact of USAID's development programs and the achievement of USAID's strategic goals.**
- **Why is ICT important for economic growth both in agriculture and non-agriculture sectors**
- **How can it help enhance development activities related to the environment as well as economic growth.**
- **Key challenges, opportunities and constraints related to ICT in sub-Saharan Africa,**

***ICT is a tool, a means to an end.
NOT a silver bullet, NOT a panacea.***

***Still comes down to
Processes and People***



Key Points

What we need for good AG development:

1. Affordable Access to Telecom Services

- **Access improving but access for the rural poor still lags**
- **A few key ways to tackle this**

2. ICT Applications to Increase Impact

- Lots of projects use ICT but far too few with apps that are sustainable, scalable.
- Why we care: key problems ICT can help solve.
- A few examples.

3. What Works – and What Doesn't

- Up-front business plans, some possible revenue sources

4. Where to Get Help



Key Points

What we need for good AG development:

1. Affordable Access to Telecom Services

- Access improving but still the rural poor still lagging
- A few key ways to tackle this

2. ICT-enabled applications to increase impact

- Why we care: key problems ICT can help solve.
- Lots of projects use ICT but far too few apps are sustainable, scalable.
- An example or two.

3. What works + and What Doesn't

- Up-front business plans: some possible revenue sources

4. Where to Get Help



Key Points

What we need re: ICT for good AG development:

1. Affordable Access to Telecom Services

- Access improving but still the rural poor still lagging
- A few key ways to tackle this

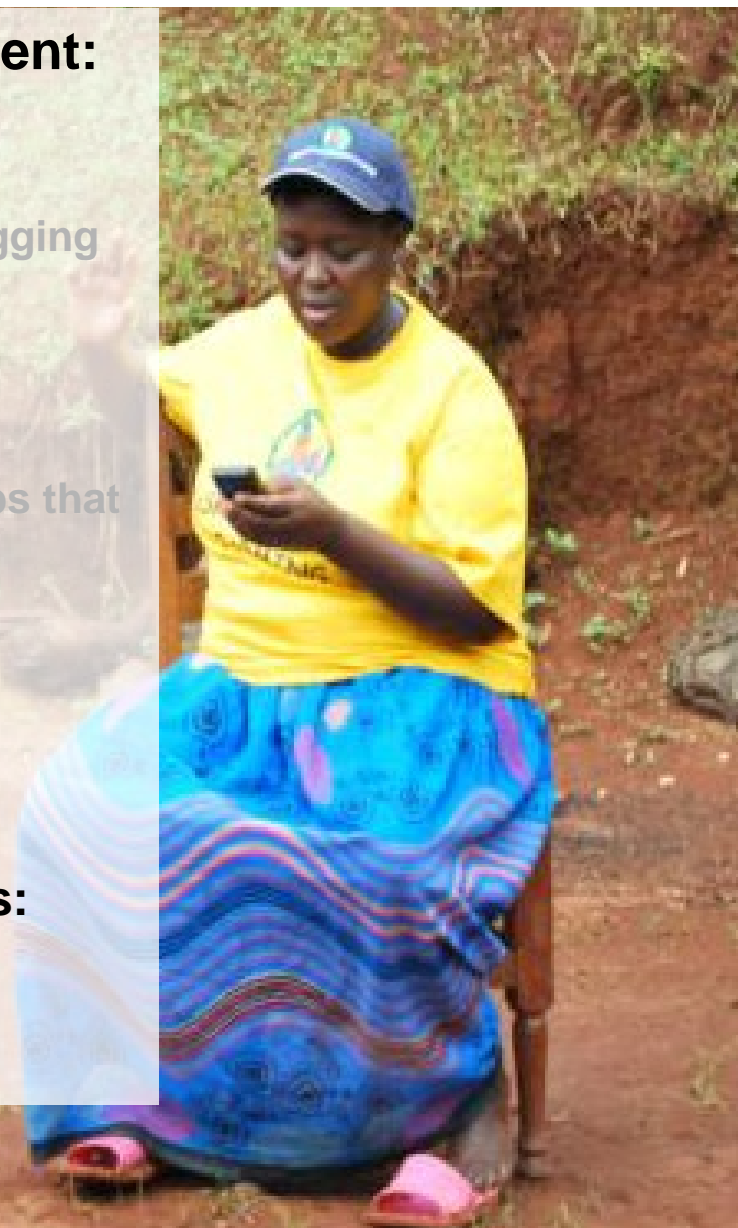
2. ICT Applications to Increase Impact

- Lots of projects use ICT but far too few with apps that are sustainable, scalable.
- Why we care: key problems ICT can help solve.
- A few examples.

3. Apps: What Works – and What Doesn't

- Among other tips: up-front business plans: some possible revenue sources

4. Where to Get Help



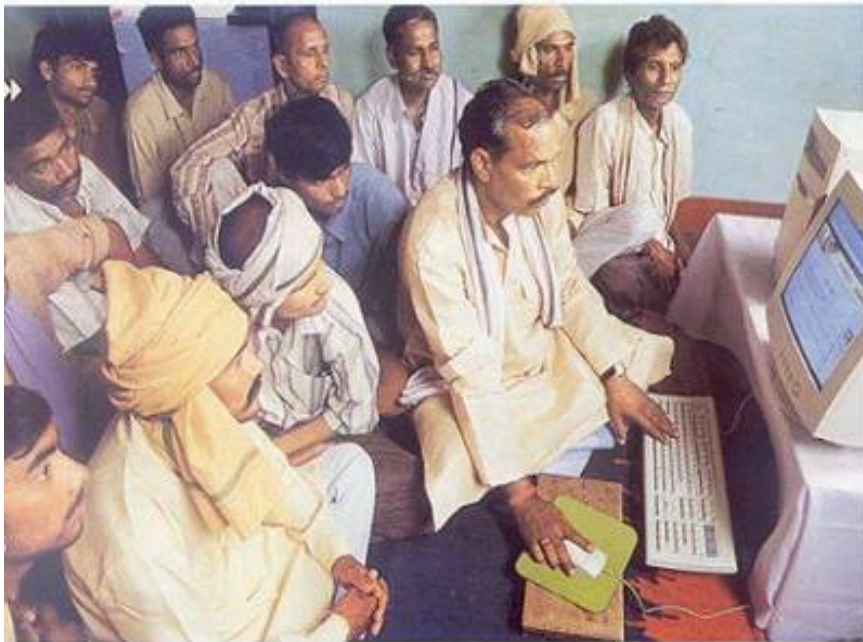
Challenges in Extension ICT May Help Meet

Too few farmers have access to the extension services they need.

And they can forget key learning – so reminders can help.

Extension messages can be tailored by crop and timed in crop cycle.

Extension workers cannot easily tap (know) all the information available to help farmers.



Extension workers may not know what farmers want to learn or don't understand.

Fast feedback loop from farmer offered by mobile networks is unprecedented – “voice of the farmer”

Opportunities to Leverage to Increase Use of ICT

Opportunities related to AG development, and econ growth

- Almost all agriculture development projects include some farm extension services.
- Some governments are modernizing extension services.
- Scalable platforms for transactions and building economic relationships; Platforms more accessible than seen in past
- Large buyers, processors know value of extension services and are using ICT themselves. (*Your examples please!*)



Opportunities related to ICT

Access to mobile networks *especially* is expanding dramatically in developing countries –*and the poor use mobiles.*

Mobile networks now handle voice and data applications.

MNOs are competing hard for market share, to reduce churn and some are turning to mobile AG services to increase appeal.

Data driven decision-making becoming more and more a requirement

Few examples from the field

9:48 AM

Select

- Farm Inputs
- Regional Weather Info
- Market Prices
- Crops
- Animals

Next

Customer

9:50

Select

- Preparation and Planting
- Crop and Garden Management
- Pests
- Diseases
- Managing and Post Harvest Handling

Next

ODK Collect > Household Survey

Household Members > Head of Household

How old is the head of household?

Age should be between 0 and 120 years.

1 2 3 4 5 6 7 8 9 0

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Marketplace

sign in

Product	Quantity	Price	Action
Tomatoes	700 kg	KES 60 PER KG	CONTACT ME
Tomatoes	200 KGs	KES 65 PER KG	CONTACT ME
Tomatoes	300 KGs	KES 63 PER KG	CONTACT ME

Search

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Locations

- KERICHO (2)
- KIRINYAGA (2)
- KISUMU (2)
- KITALE (2)
- KITENGELA (1)
- LALA (1)

MNO's keen to make \$\$, reduce churn with mAgri

Two USAID cooperative agreements focused on *scaling*

- *mFarmer Initiative*

- GDA with Gates Foundation; GSMA implementer
- mExtension services
- 3 MNO's in Africa: Tigo, Airtel, Orange
- 1.5M small, poor farmers

- *Connected Farmer Alliance*

- GDA with Vodafone (\$8M): USAID (\$5M); TNS implementer
- mFinancial Services, Supply chain apps
- 500k small, poor farmers (TZ, Kenya, Moz)

Upcoming: ICT Innovation Challenge

{part of New Alliance for Food Security}



Tips on Increasing Success

What Works:

- “Gandhian innovation¹: frugal, sustainable, hence scalable.
- Design for scale – target top priority functionality – not “need”
- Adapt existing software platforms
- Use lead farmers, peers.
- Confirm content with experts.
- Use feedback loop: *regularly, seriously*
- Ask **and** answer: *is this cost effective? (is it “good enough” approach)*
- *Public-private partnerships!*
- *Allow for experimentation, failure*

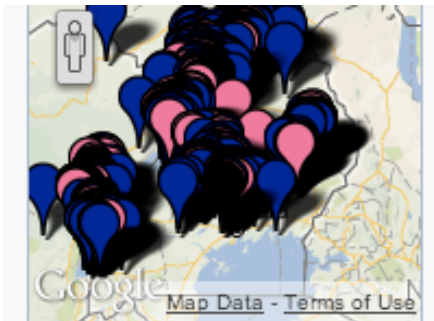
What Doesn't:

- We need “success stories”!
- Let's just do a few pilots...
- **Assume that** ICT tool is helping **and** is most cost effective approach
- Build it yourself in-house
- The lure of “cool” devices...



So to close: Relevant to today

- Disseminating information, Scalable extension of content
- Building content platforms; Bridging Research–Extension divide
- Monitoring and Operations – also facilitating M&E but encouraging the mental change to see value of using day-day visualization of projects and business opps
- Transactions and Strengthening value chains; Building markets; Financial services



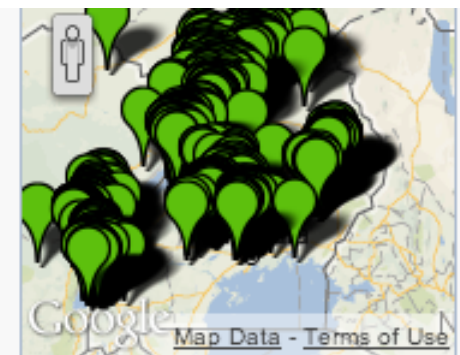
CKW distribution by Gender
Blue = Male, Pink = Female
[Click for detailed map](#)

Feedback loops

Improving timelines + Visibility

Challenges:

- **New systems** – when no existing infrastructure !
- **Uptake** - **Trust**
- **Quality**



CKW distribution by Poverty
Green = Very Poor, Yellow = Poor
[Click for detailed map](#)

Where to Get Help

USAID/WDC: EGAT ICT Team, AFR Bureau (AFR/SD/EGEA)

mFarmer: GDA with Gates/GSMA to scale mobile extension services
www.gsmworld.com/mfarmer

FACET: Knowledge Mgmt and short-term TA for ICT and AG
(*google* FACET USAID)

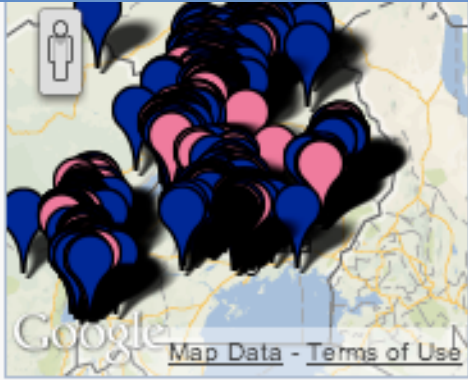
E-Agriculture: www.e-agriculture.org

World Bank: *Source Book*
<http://www.ictinagriculture.org/ictinag/>

Jill S. Shemin jshemin@usaid.gov



THANK YOU



CKW distribution by Gender
Blue = Male, Pink = Female
[Click for detailed map](#)



FBO / Farm management

The FBO/Farm Management module consists of mobile application (java and android) that allows FBOs to profile their members and send to the platform on real time...

\$ 0.00

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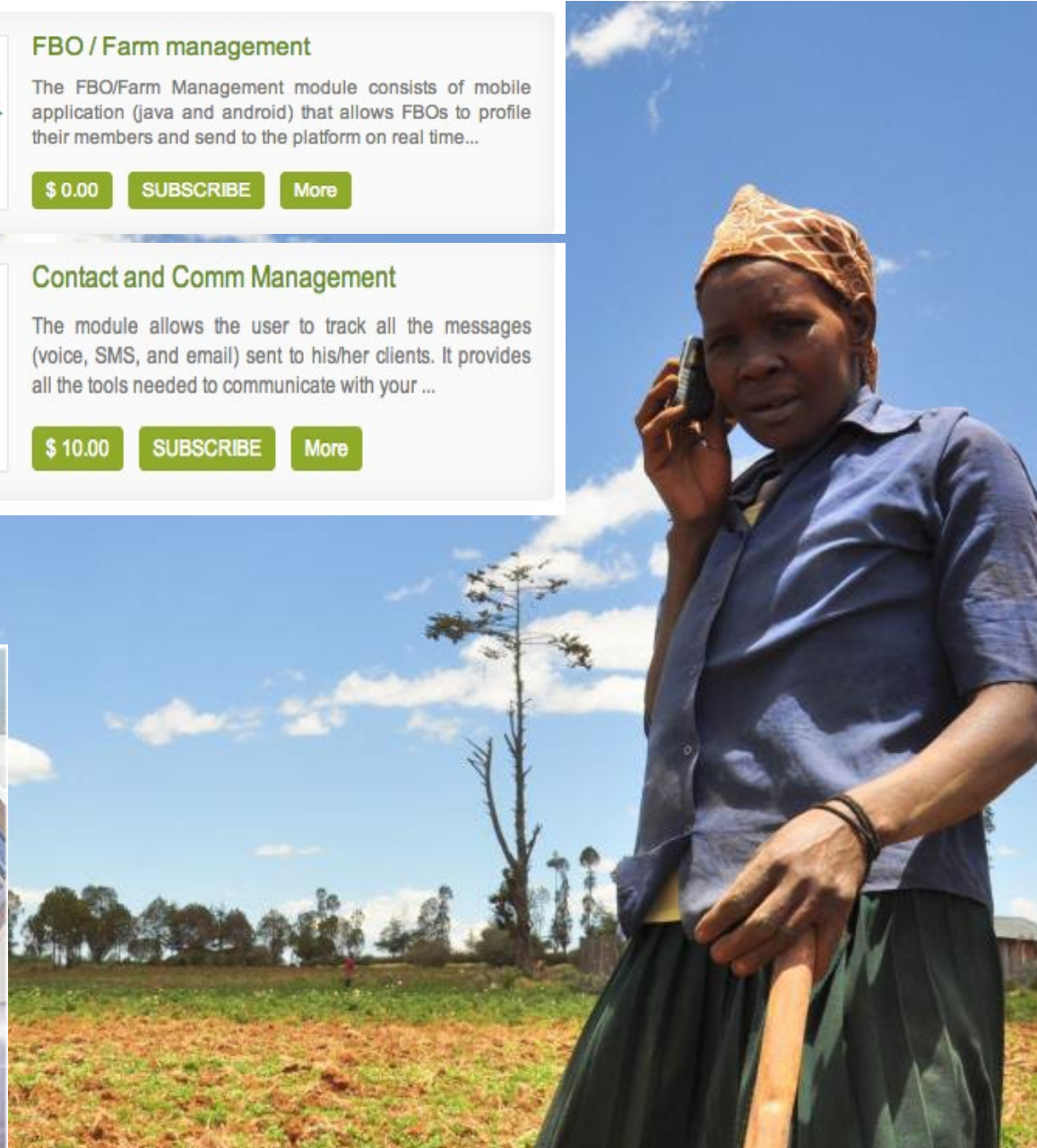
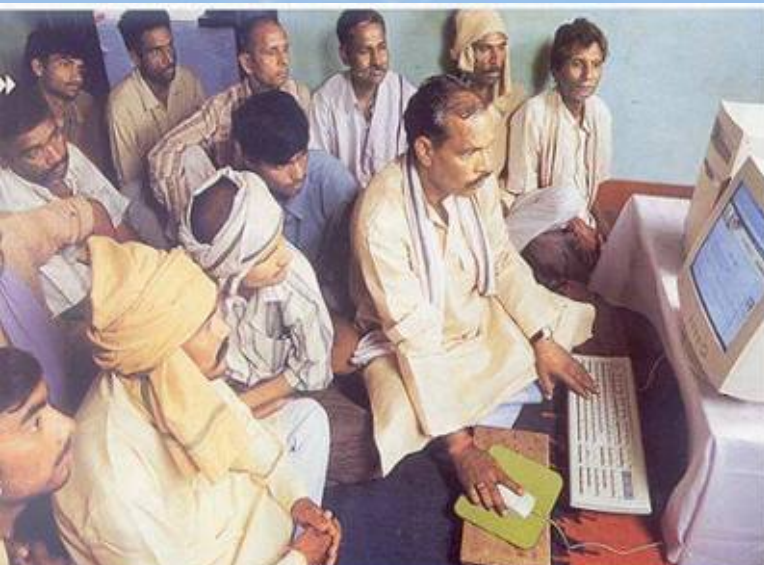
Contact and Comm Management

The module allows the user to track all the messages (voice, SMS, and email) sent to his/her clients. It provides all the tools needed to communicate with your ...

\$ 10.00

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Handouts:

Back-ups/Extras

Why?	ICT Applications and Tools
<p>Help large buyers/processors manage their relationships with 1000s of smallholder farmers better – for gain of buyers +producers</p> <ul style="list-style-type: none"> • Decrease sideselling • Monitor supply chain and expected yields • Improve quality of production • Coordinate/streamline aggregation, buying 	<p>App with backend database that helps buyers determine expected yield; learn where best production + most productive farmers</p> <ul style="list-style-type: none"> ○ detailed producer profiles; ○ track inputs distributed; measure against production • Push, pull SMS helping buyers reward best producer • GPS mapping + visual Dashboard from database
<p>Improve functioning of ag markets Overtime, build price convergence and level of confidence</p>	<p>Market Price Info Systems (MIS) available by a widely accessible system (or collection of systems that augment each other.)</p>
<p>Improve integration of value chain</p> <ul style="list-style-type: none"> • Empower farmers’ decision making power - i.e., Farming as a Bus thinking; bargaining power • Empower traders - as providing a service for a fee, not short-changing blind farmers. 	<p>Market Price Info Systems (MIS) available by a widely accessible system (or collection of systems that augment each other.)</p> <p>Decision making tools comparing prices at various markets and estimated cost of transport for farmer’s produce.</p>
<p>Increase saving, provides path to other financial products, including insurance; get funds faster from relatives at key times when needed, reduce borrowing;</p>	<p>Mobile Money, m-Banking, more m-financial services</p>
<p>Help small producers afford best inputs and receive at right time. Help input providers know demand and aggregate delivery. Help input supplier assess potential rural market better and invest in extending distribution.</p>	<p>Aggregate demand. e-vouchers/M-Vouchers to offer up-front discounts on inputs at end of season and delivered at beginning of next season.</p> <p>Feedback system that is automatic -- see purchases of products; over time use to inform business and target products</p>
<p>In a scalable way teach more farmers good farming practices to boost productivity (complementing proven methods that are more intensive and less scalable – face-to-face, posters, demo plots)</p>	<ul style="list-style-type: none"> -Low-cost videos in local languages shared by many -Recorded/replayable audio programs -Call Center -Interactive radio programming, i.e., can be combined with SMS service
<p>Increase adoption of good farming practices to boost productivity and Convincing farmers to actually <i>change</i> practices and benefits they will see</p> <ul style="list-style-type: none"> • Reinforce messages from other means; Increase uptake + adoption 	<ul style="list-style-type: none"> -Mobile messaging (inbound, outbound): reminders, alerts (SMS; voice messaging) -Melodramas on IVR (e.g., Freedom Fone) -Call Center -Compelling radio programs – with “Voice of the Farmer” via cell phones, more
<p>Clearer picture of farmer agricultural behavior with a feedback loop to/from farmers</p> <ul style="list-style-type: none"> • Use of/implementation of information and tools • Enable feedback loop that operates in a timely manner <p>Data-driven decisions: Informing policy and programming</p>	<ul style="list-style-type: none"> -Databases and system that accrue data automatically from usage. <ul style="list-style-type: none"> • i.e., farmers accessing information - what information and where they are given their profile or an original survey • analytics on most frequently searched content -Low-cost mobile surveys -Ease of ICT tools for more frequent deployment and clearer picture

1. Zoono, Zambia

Supplier payments:

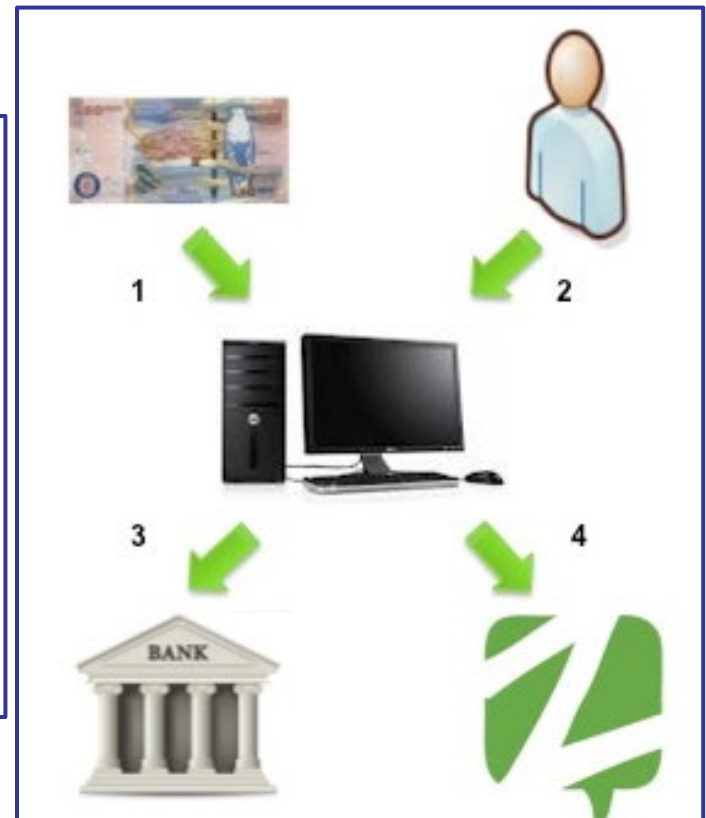


Supplier payments: Payments out

A Zoono account is set up for a company. When a lump sum amount is deposited into the account, can make payments equal to this amount (less any fees).

3 things happen to initial payments

As soon as the payroll is authorized, Zoono automatically processes payments into corresponding bank accounts.



2. mFarm, Kenya <http://mfarm.co.ke/>

[home](#) [prices](#) [marketplace](#) [about](#) [services](#) [team](#) [contact](#)

Marketplace

sign in



Tomatoes

700 kg

KES **60** PER KG

CONTACT ME

Fresh green house tomatoes in Rongata Rongai available for delivery in 2weeks time .
Delivery: NO



Tomatoes

200 KGs

KES **65** PER KG

CONTACT ME

Fresh available green house tomatoes from ruaka
Delivery: NO



Tomatoes

300 KGs

KES **63** PER KG

CONTACT ME

EVA 1 Tomatoes from Kiserian ready in two week's time.
Delivery: NO

Search

Search

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Locations

- ❖ KERICHO (2)
- ❖ KIRINYAGA (2)
- ❖ KISUMU (2)
- ❖ KITALE (2)
- ❖ KITENGELA (1)
- ❖ LALA (1)

mFarms, Ghana www.mfarms.org



Farmer / Farm Management

The module is designed to create operational efficiency...

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FBO / Farm management

The FBO/Farm Management module consists of mobile application (java and android) that allows FBOs to profile their members and send to the platform on real time...

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Farmer Input Demand Pool

The module allows agro-dealers to solicit from farmers the quantities of agro-inputs they will need during the farming season. This ensures agro-dealers supply ...

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Extension services monitoring

Farming is becoming a more time-critical and information-intensive business. A push towards higher productivity will require an information-based decision-making ...

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Crop Production Estimation

The module provides users to determine cost of production per some selected crop. This module ensures that farmers applying for loan to cultivate specific crop ...

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Agro Input Dealer Management

The Agro-Dealer Management module has been developed to strengthen the linkages among agro-input supply chain actors. The module provides the platform for agro-...

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Field Agent Management

The module consists of mobile phone application (java and android) and web application for field agents hired by the aggregator to manage network of farmers he/...

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Contact and Comm Management

The module allows the user to track all the messages (voice, SMS, and email) sent to his/her clients. It provides all the tools needed to communicate with your ...

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Community Knowledge Worker, Uganda

CKW uses mobile phone applications and human networks GF has created to provide poor 'last mile' farmers with relevant, timely agricultural information, Focus is on reaching the 'last mile' at scale, a sustainable model delivering services to the poorest.

- Information helps farmers improve their lives and livelihoods by increasing their productivity and income. Gives CKWs a 'business in a box' which include phone charging solution
- Sustainable model includes offering CKW data collection data collection request in CKW areas. CKWs are paid
- Has also developed field force management tool and is intended to support CKW network

ODK Collect > Household Survey

Household Members > Head of Household

How old is the head of household?

Age should be between 0 and 120 years.

1 2 3 4 5 6 7 8 9 0

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Select

Farm Inputs

Regional Weather Info

Market Prices

Crops

Animals

Next

Select

Preparation and Planting

Crop and Garden Management

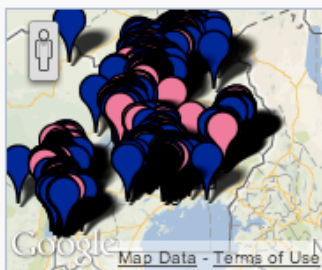
Pests

Diseases

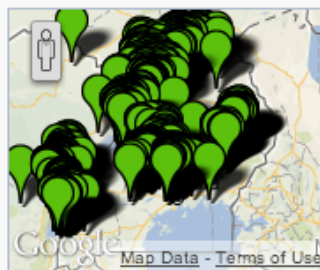
Manure and Post Harvest Handling

Next

▼ CKW Maps



CKW distribution by Gender
Blue = Male, Pink = Female
[Click for detailed map](#)



CKW distribution by Poverty
Green = Very Poor, Yellow = Poor
[Click for detailed map](#)



CKW distribution by Status
Black = Inactive, White = Active
[Click for detailed map](#)

Scale

Develop scalable solutions that increase the reach of effective Ag Extension services to more poor farming households.

Metric	Target	Actual	Prev. Actual	Comment	Updated	Trend
Total farmers reached	150,000	150,097	139,549		Daily	
% Female	30	34.05	33.81		Daily	
% Very poor	35	43.28	43.4		Daily	
Total interactions	2,251,247	1,557,110	1,507,355		Daily	
Total number of surveys submitted	N/A	63,964	59,411		Daily	
Total Closed Call Center Cases	N/A	282	2,372		Ticker	
Total number of searches conducted	N/A	1,026,833	982,947		Ticker	
Total number of complete USSD searches	N/A	0			Ticker	
Total number of broadcasts via SMS	N/A	466,327	464,997		Daily	
Total CKWs deployed and retained	1,200	1,072	999		Daily	
% Female	N/A	34.42	34.13		Daily	

