

Empowerment via Digital Agriculture - Evidence from East Africa



Emmanuel Bakirdjian
June 24, 2021



PxD at a Glance



Global non-profit organization with operations in ten countries in Africa, Asia, and Latin America

Founded in 2016 by four co-founders - including professors at Harvard, Chicago, and Brown - with expertise in impact evaluation, business, technology, and agricultural development

Offices in six developing countries, and partnerships with national and state level governments

200+ employees with mix of technologists, data scientists, agronomists, researchers, and program managers



Mission

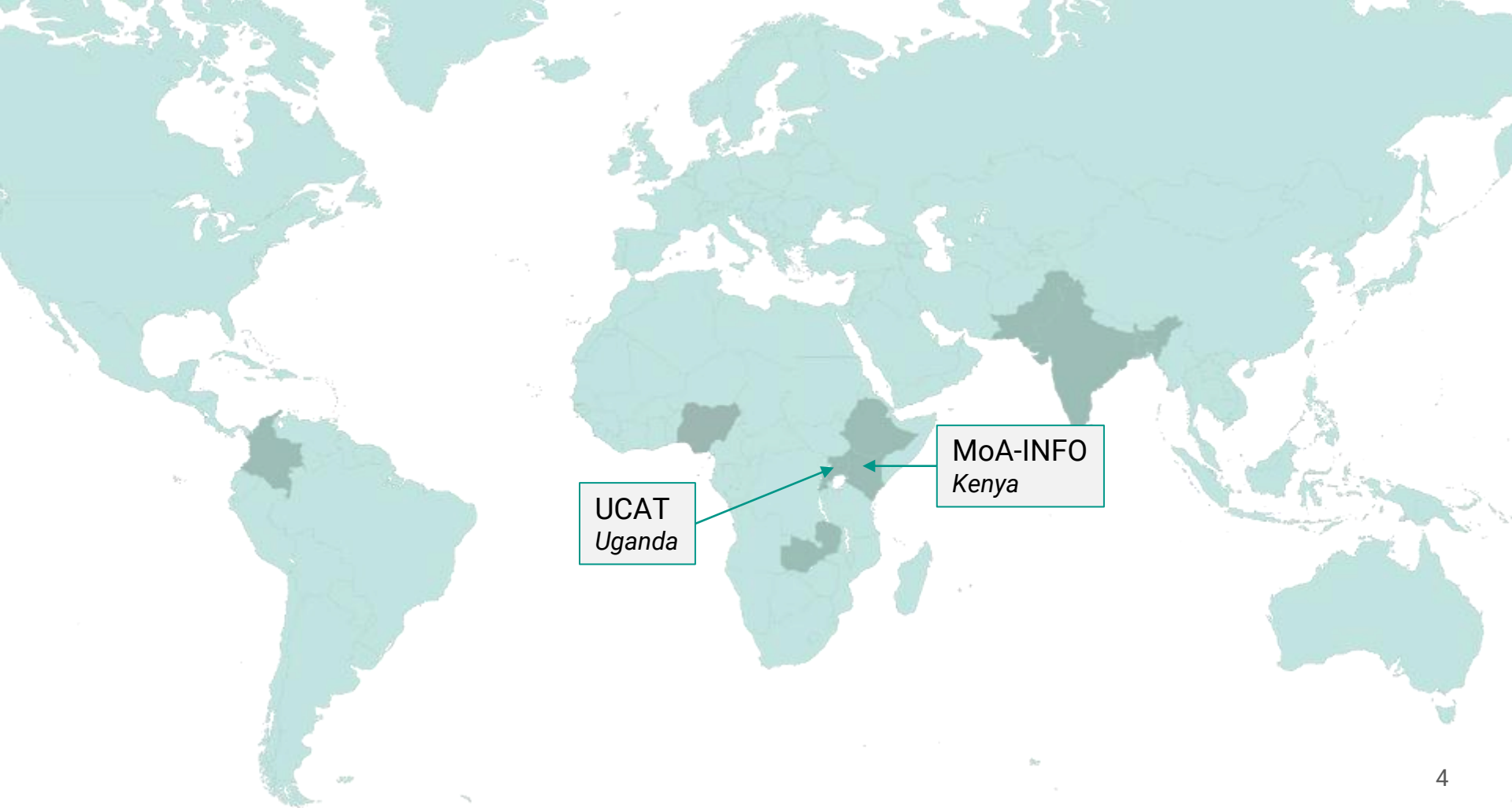
We provide actionable information and other scalable services to people in poverty to empower them to sustainably improve their well-being

Vision

An end to information poverty

Goal

Positively impact 100 million of the world's poor



UCAT
Uganda

MoA-INFO
Kenya

MoA-INFO SMS Platform - Kenya



- On behalf of the Kenya Ministry of Agriculture, PAD set up and launched **MoA-INFO** in 2018
- The impetus: **Fall Armyworm (FAW)**
- It also provides actionable and customized **farming advice** for 11 crops
- It is **free** and available in both English and Swahili
- **650,000** users have registered on the platform since its launch

Who are our users?



31% Female
69% Male



Average
40 years



Average farm
3 Acres



33% Swahili
67% English



39% Primary
49% Secondary



80% Seen
fall armyworm



98% Planted
maize



29% Smart
phones

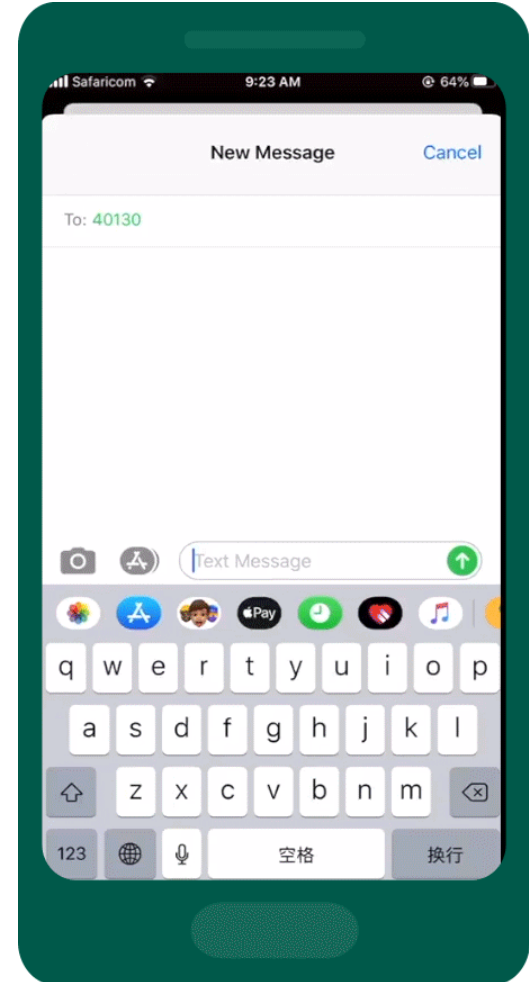


93% Read
SMS daily

What's on the Platform?

Registration

- We ask new users for:
 1. Their location (County > Constituency > Ward)
 2. Their first name (optional)
 3. Crops of interest
- We then send them some advice regarding FAW management



What's on the Platform?

Cropping Series

- Available for 11 crops, weekly or bi-weekly messages timed to the farmer's planting cycle stage
- Users choose 2 crops at the beginning of the season
- They can access information about the other crops through a menu
- They can change their cropping series whenever they want and update their information throughout the season
- Topics covered range for pre-planting to post harvesting management



What's on the Platform?

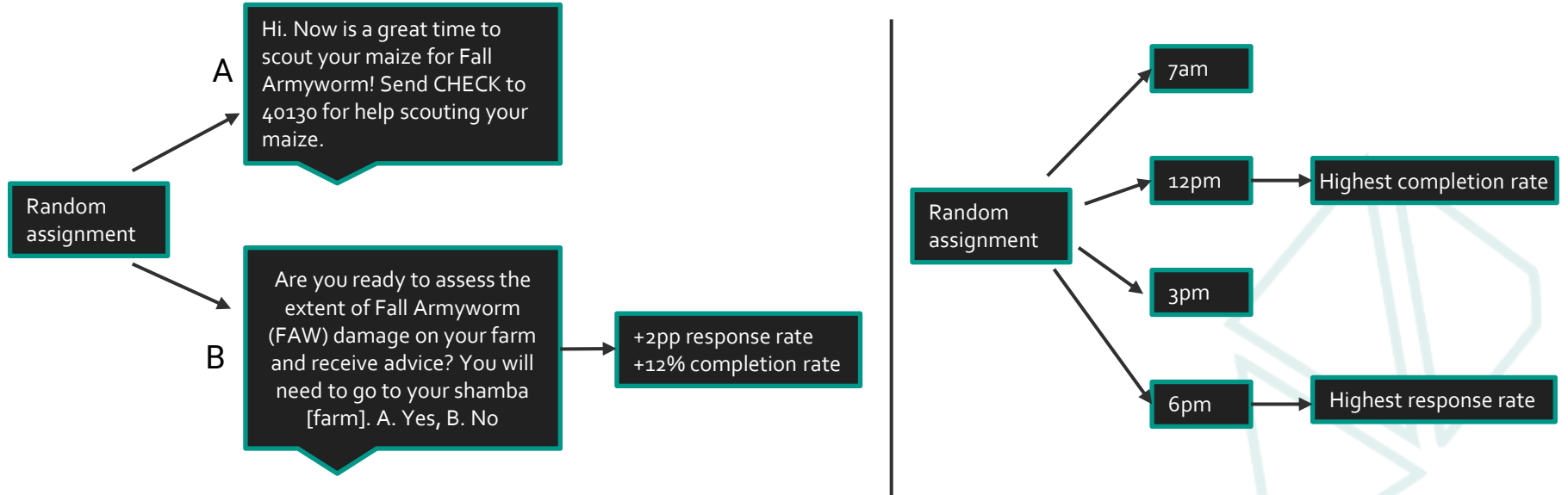
Decision Support Tools

- **Seed selector tool:** customized seed varieties recommendations for maize & beans
- **FAW monitoring tool:** rate of FAW infestation and advice based on reported infestation rate
- **Fertilizer tool:** customized fertilizer recommendations based on their location and budget



A/B tests

Increasing engagement within the FAW monitoring tool



Way forward: Send message B at midday

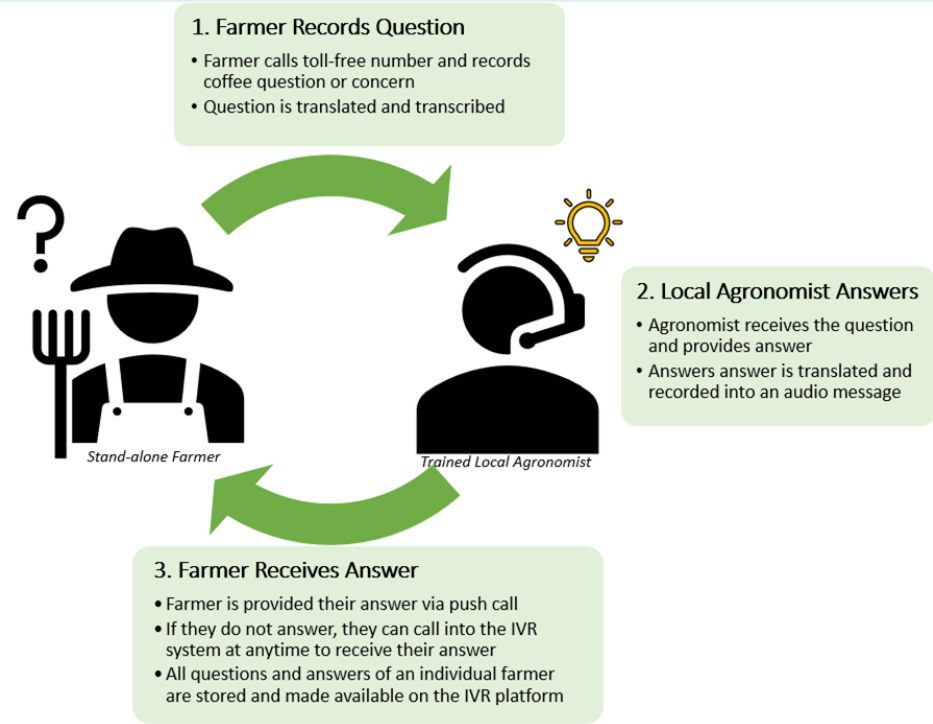
Uganda Coffee Agronomy Training (UCAT) project

- Partners: HRNS and TechnoServe, deliver in-person training to ~60k coffee farmers via Farmer Field Schools
- PxD shares content to 4,000 farmers via IVR:
 - Half receives both in-person training and advisory messages on similar topics (reinforcement group)
 - Half only receives PxD advisory messages and has access to a Q&A service (standalone group)
 - Messages are approximately 2 mins long

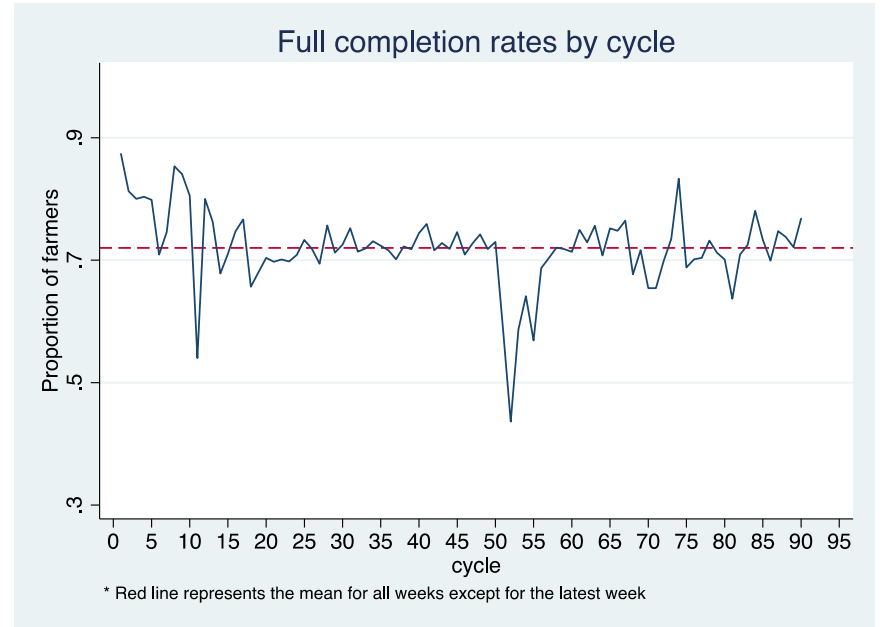
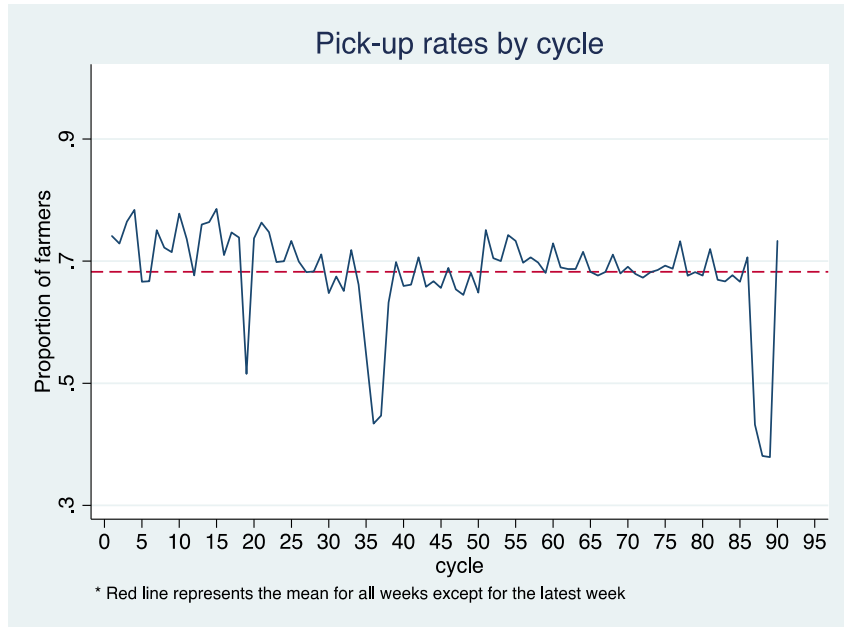


IVR Menu

1. Listen to this week's message
2. Ask a question to the agronomist
3. Listen to previous Q&As
4. Listen to last week's message
5. Unregister or change your number

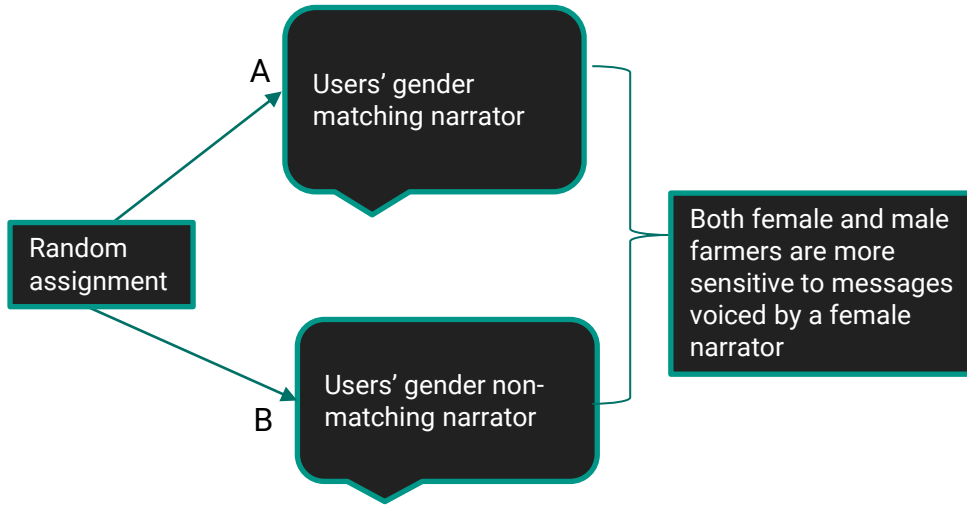


Engagement – pickup & listening rates



- User retention rate: above 90% from program launch
- Satisfaction: over 80% of surveyed farmers reported discussing the content of our messages with their family and friends

Gender A/B test



- Switching the content from being voiced by a male narrator to a female narrator:
 - ↑ female farmers pick up and listening rates
 - ↑ male farmers listening rates
- Switching the content from being voiced by a female narrator to a male narrator:
 - ↓ male farmers listening rates

➡ Way forward: Voice contents by female narrators

[See our blog post on Gender A/B tests](#)



Thank you!

precisionag.org

kenya@precisionag.org