



# Precision Agriculture for Development (PAD)

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*Disruptive Agricultural Technology (DAT) Challenge and Conference*

*April 5<sup>th</sup>, 2019*

# Fall Armyworm: a major threat to food security

1. Fall Armyworm (FAW) is an invasive pest that arrived in West Africa in 2016 and rapidly spread over all sub-Saharan countries
2. It can feed on over 80 crops making it one of the most damaging crop pests. Its favorite crop is maize, the main staple of SSA
3. FAW can spread quickly across large geographic areas (moths can migrate over 500km) and can persist throughout the year
4. Losses estimated at 4-17.7 million tonnes annually and \$1-\$4.6 billion annually in the top 12 maize producing countries in Africa
5. Many farmers do not know how to respond and may take inefficient or dangerous control measures → very high demand of information



# The MoA-INFO SMS platform: providing critical agronomic advice at scale

1. On behalf of the Ministry of Agriculture (MoALFI), PAD set up a two-way SMS platform, MoA-INFO, officially launched in July 2018 by Prof. Boga
2. MoA-INFO provides critical information about FAW to help farmers manage the pest in their field and adopt optimal and safe control measures
3. It is free for Safaricom and Airtel customers and available in both English and Swahili
4. It also provides actionable, customized, and high-quality farming advice for maize, beans, and potatoes to help farmers increase their productivity
5. MoA-INFO content was developed with the MoALFI, KALRO, KEPHIS, CABI, and other experts. All content was approved by the MoALFI



July 2018



355,000 users



47 Counties



+20% knowledge

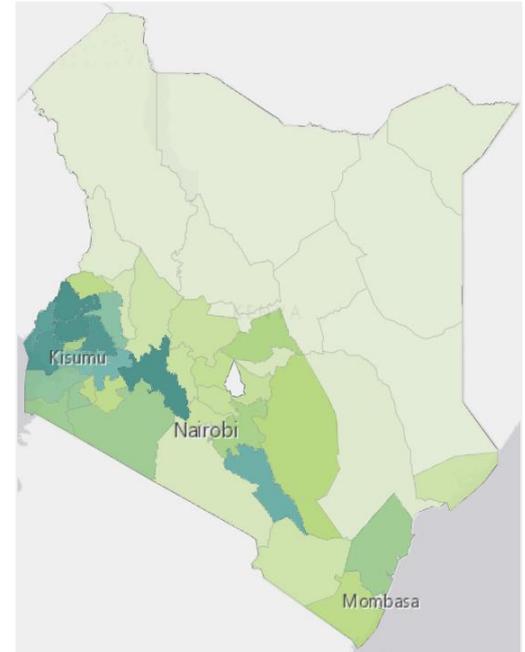


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# Scaling up to 1 million users by 2021

1. Continue using our cost efficient user acquisition strategy through our partnership with Safaricom
2. Continue adding more crops, more decision support tools, and more customized advice to bring more value to the users
3. Bring more partners onboard to disseminate their own content (CIAT, CIMMYT) or relay MoA-INFO content to their clients (OAF, GiveDirectly)
4. Utilize the DAT Platform to develop partnerships with organizations that can offer a broad range of services to farmers (soil testing, disease alerts)
5. Continue using an iterative process of refining, testing, and improving the content to ↑ impact and ↓ costs



# What we will need

1. **Knowledge resources:** partnering with experts (MoALFI, KALRO, CGIAR, etc.) and DAT innovators to expand the content available on MoA-INFO
2. **Financial support:** dedicated funding will be required to support the ongoing costs of running and expanding MoA-INFO
3. **Policy:** accessing farmers data collected by the Government and other institutions will help develop more customized and relevant advice



# What PAD brings to the platform

## 1. Reach

- High level partnerships (Government, Telcos) to reach scale
- Affordable, accessible, and scalable technology (SMS)

## 2. Value

- Constant iteration, use of behavioral economics, and rigorous testing
- High-quality, actionable advice helping farmers increase their productivity
- Low cost, free to farmers

## 3. Precision

- Human centered design
- Customized recommendations (time of season, user location)

## 4. Expertise

- Top, interdisciplinary researchers
- Data analytics expertise – from collecting farmers feedback to analyzing big data



# Thank you

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# Meet the team



**Michael Kremer**  
*Co-founder and  
Program Lead*

***Gates Professor of  
Developing Societies,  
Harvard University***

Academic with  
experience bringing  
research-backed ideas  
to scale, expertise in  
African agriculture.



**Emmanuel Bakirdjian**  
*Kenya Country  
Director*

Previous J-PAL and  
IPA experience.  
Worked in South  
Africa and on coffee  
programs in Rwanda.



**Carol Nekesa**  
*Director of  
Operations*

Previously worked for  
IPA, Nadel University,  
Evidence Action, and  
the Programme for  
Agriculture and  
Livelihoods in  
Western  
Communities.



**Sam van Herwaarden**  
*Data Scientist*

Previously worked as  
an analyst in Dutch  
healthcare at  
Intelligence2Integrity  
and has additional  
experience in machine  
learning and remote  
sensing.



**Maureen Kuboka**  
*Agronomy Associate*

Previously worked  
with Koppert  
Biological Systems  
Kenya. Has  
experience research,  
development,  
programming and  
agronomy.