Moderator:

Sonja Ruetzel
ICT4D Partnerships & Conference Manager
Catholic Relief Services

Speakers:

Ram Kiran Dhulipala
Theme Leader, Digital Agriculture & Youth, Innovation Systems for the Drylands,
The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

Erna Goudt
Client Relationship Manager
eProd Solutions Ltd

Jonathan Lehe
Chief Development Officer and Director of New Programs,
Precision Agriculture for Development (PAD)

Dr. Anthony Whitbread
Research Program Director, Innovation Systems for the Drylands, Country Representative of Tanzania
ICRISAT
Supporting Farmers with low-cost digital tools during Covid-19

- Ram Kiran Dhulipala, ICRISAT
Extension

• Traditional extension
  • Field visits and workshops
  • Expensive
• E-Extension
  • New channels – mobile, TV, social media
  • Offer convenience and contextualization
  • Potential to blend scientific and localized indigenous knowledge at scale
• Current Situation
  • Experimental & mostly pilots
  • Opportunity to mainstream
• Challenges – human capacity along the extension value chain
• Examples –
  • iSAT (India) – 8,000 farmers
  • AVCD (Kenya) - 20,000 farmers
Input Value Chains

- New self-service apps or agent led e-commerce models for seeds, fertilizers, etc or digitalization with existing structures
- Enhanced digital adoption to cope with disruptions
- Disintermediation and enhanced transparency
- Dataification of the more informal input supply chains
- Digital trail could pave the way for access to more institutional finance

Bayer ties up with AgroStar to deliver products to farmers during lockdown

Agriculture Marketing

- Market linkages from the farm gate through self-service or agent led models
- Traceability and food safety assurance
- Challenges of grading and trust however continue to persist
- Digital trail will pave the way for access to more institutional finance

Examples – Telangana horticulture partnership with kalgudi (https://telanganatoday.com/now-mangoes-at-your-doorstep-in-hyderabad);

For India’s distressed farmers, a little bit of help on Twitter

https://indianexpress.com/article/india/for-indias-distressed-farmers-a-little-bit-on-help-on-twitter-6382577/
Collectivization of farmers aided by digital tools

Innovations range from knowledge sharing to virtual aggregation of produce

Uber like online marketplaces for mechanization of farming

Usage of drone for spraying emerging in clusters

Transportation E.g -
Learnings

• Information Systems approach vs a Information Technology approach
  • Importance of people, process and technology (ITIL framework)
  • “Fall in love with the problem and not the solution” – Uri Levine, founder of Wade

• Simple but not simplistic
  • Digital solutions should blend mindful of the social and environmental contexts
  • Rapid iterations and prototyping backed by evidence and feedback
  • Human and institutional capacities equal if not more important
Thank You
Supply Chain Management system for agribusinesses

ICT4D

19.05.2020
OVERVIEW OF EPROD

We offer:

- an ERP for **Agricultural Supply Chain Management** to our clients: agricultural commodity traders, food processors and farmer cooperatives.

- used in **10 countries** across Sub-Saharan Africa and Asia in over **20 value chains**.

- a unique **data generator creating** valuable information for the agricultural sector.
WORKING REMOTELY WITH FARMERS DURING COVID-19: LESSONS LEARNT

<table>
<thead>
<tr>
<th>Challenges</th>
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<tbody>
<tr>
<td>1. Collecting quality data: registration of farmers and their fields</td>
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<td>2. Gather reliable production and survey data from farmers</td>
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<tr>
<td>4. Cashflow constraints throughout the sector</td>
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FARMER AND FIELD REGISTRATION

- Bio
- GPS location
- Banking information
- Group membership
- Farmer field information
- Production contract
REGISTER FARMERS IN THE FIELD
GATHER RELIABLE PRODUCTION AND SURVEY DATA FROM FARMERS

- Plan field activities
- Product certification
- Schedule follow-up tasks
- Traceability
COLLECT DATA IN THE FIELD THROUGH FIELD SURVEYS

The eProd MOBILE APP is easy to use for field officer and offers the key features to manage and monitor farmers through field inspections.
SHARE INFORMATION WITH FARMERS

- SMS
- Email reports
- Weather forecasts
- Agronomic advice
- Farmer training
COMMUNICATE WITH FARMERS

URGENT: Preventive spray Late Blight on Irish Potato crop today (06/28/2017).
CASHFLOW CONSTRAINTS

- Mobile payments
- Credit management
  - Reduce Credit Risks
  - Reduce Transaction Costs
Thank You

contact us: info@eprod-solutions.com; www.eprod-solutions.com
Location: Eaton Place | United Nations Crescent | Nairobi | Kenya
Precision Agriculture for Development

ICT4D Webinar: Supporting Farmers Globally with Low-Cost Digital Tools During Covid-19

Jonathan Lehe
May 19th, 2020
PAD at a glance

Global non-profit organization with operations in 8 countries in Africa and Asia

Founded in 2016 by 4 co-founders - including 2 Harvard professors - with expertise in impact evaluation, business, technology, and agricultural development

Offices in 4 developing countries, and partnerships with national and state level governments

193 employees with mix of technologists, data scientists, agronomists, researchers, and program managers
Mission: Support smallholder farmers in developing countries to increase their yields and net incomes, and advance environmental sustainability.

Vision: Transforming agricultural extension by harnessing technology, data science, and behavioral economics.

Goal: Positively impact 100 million farmers.
PAD is currently reaching 3.6 million farmers across 8 countries*

- Gov'ts Odisha, West Bengal
- International Rice Research Institute (IRRI)
- Coffee Board
- One Acre Fund
- Ministry of Ag
- CABI
- One Acre Fund
- Rwanda Agricultural Board
- Agricultural Transformation Agency (ATA)
- Digital Green
- Awaaz.de
- Departments of Ag, Punjab, KPK
- Technoserve
- Hanns R. Neumann Stiftung (HRNS)
- mPower
- Ministry of Ag
- CABI

*Farmer reach numbers as of Q1 2020
PAD’s response to Covid-19

- Key features of digital information tools to respond to Covid:
  - Do not require face-to-face contact
  - Highly scalable
  - Cost effective
  - Two-way
  - Customized
  - User-centered
  - Data-driven
  - Evidence-led
Kenya: Two-way MoA-INFO SMS platform provides critical agronomic advice at scale

- PAD launched MoA-INFO, a **two-way SMS platform**, in July 2018 on behalf of Kenya Ministry of Agriculture (MoALFI)
- Originally established to address the **Fall Armyworm** emergency to help farmers manage the pest and adopt optimal control measures
- Expanded to provide comprehensive farming advice for **6 crops**
- ~**360,000 users** reached with free information in English or Swahili
- While many in-person services for farmers have been disrupted in Kenya, MoA-INFO remains **fully available** and will soon add **3 new crops**
Uganda: Two-way voice-based service provides digital advice to smallholder coffee farmers

- **Coffee advisory in collaboration with TechnoServe and HRNS:**
  - Reminders about key practices to farmers receiving in-person training
  - Comprehensive agronomic advice to farmers not receiving in-person training
  - Farmers can also access an automated Q&A hotline to ask questions to an agronomist who answers them within 48hrs

- **Due to the current lockdown, in-person training is paused; PAD stepped in to provide:**
  - Comprehensive agronomic advice
  - **Covid-19 advisory content** (based on recommendations from the Ministry of Health)
  - Description of Covid, common symptoms, how to avoid spreading it, and where to get more information
India: Two-way voice-based advisory services are adapting to combat the Covid pandemic

- PAD provides outbound push calls and inbound IVR hotline to ∼830,000 farmers across 6 states in India
- Flagship in Odisha reaching ∼700,000 farmers in partnership with Department of Agriculture
- With traditional extension suspended, these services have remained open, adding 40-50k farmers per month, and are expanding to fill new gaps
- New types of information (including crowd-sourced)
  - Which markets remain open
  - Which crops are sold on which days at what prices
  - Which agricultural activities are exempt from lockdowns
  - Organic inputs to use while markets are inaccessible
  - Storage of crops that cannot be sold at markets
Gathering systematic data on Covid-related issues to inform policy-making

- Multi-country phone survey in Kenya, India, and Pakistan to assess impact on agricultural production, supply chains, food security, and farmer behavior

- Data on agricultural market disruptions
  - Disruptions and plans for planting, harvesting, etc.
  - Access to inputs, outputs, labor, transport, finance, etc.
  - Food security and changes in food availability
  - Price changes, income loss, spent savings, sold assets, migrated
  - Kenya: Agro-dealers’ participation in markets
  - Pakistan: Impact on in-person extension activities
  - India: Data shared with government on weekly basis

- Data on Covid-related knowledge and behavior
  - Knowledge (and misinformation) of health messages
  - Health behaviors such as hand washing and social distancing
PAD is developing new digital tools to help farmers respond to Covid-19

- Solutions to Covid-related market disruptions
  - India: PAD’s live call center has become triage center for farmers’ queries related to Covid lockdowns
  - Connecting farmers with vetted database of agro-dealers, output buyers, transport providers, financial service providers
  - Aggregating, forecasting, and disseminating supply and demand information, such as quantities and prices
  - Publicizing new government policies or services

- Covid-specific health information
  - Public health campaigns, hand washing, social distancing
  - A/B testing of message content and service delivery to optimize impact on farmer behavior
Conclusion: Invest in digital agriculture tools for short-term and long-term impact

- Digital agricultural extension is scalable and cost-effective even in normal times
- In the current Covid context, investing in low-cost digital tools is even more urgent
- These tools should be two-way, user-centered, with A/B testing and real-time feedback
- Investing in digital technology now will yield both short-term and long-term returns
Empowering farmers with high quality information at their fingertips.

www.precisionag.org
PAD contact: Jonathan Lehe (jlehe@precisionag.org)
Discussion:

Upcoming virtual events include:

Tuesday June 9: Designing digital tools for Covid-19 Response for and with the User

In case you missed it:

Recorded sessions of the Global Digital Development Forum
https://digitaldevforum.com/

THANK YOU!

www.ict4dconference.org