This presentation is part of the

Agriculture and Nutrition Global Learning and Evidence Exchange (N-GLEE)

held in Kampala, Uganda from December 10-12, 2012.

For additional presentations and related event materials, visit: http://spring-nutrition.org/nglee-africa
Digital Green is an ICT enabled communication model for sustained social change at scale.

We use social organization and technology to improve the efficiency of agricultural extension systems globally.
Project at Microsoft Research

HOW WE EVOLVED

2006
- Non-profit in USA and India

2008
- Implementation in 4 Indian states

2009
- Extend to health & nutrition in Ethiopia and Ghana

2012
- Scaled to 7 Indian states

2015
- 11,000 villages 1 million farmers

- 1,800 villages 125,000 farmers
Agricultural Context

2 billion lives (1/3rd of humanity) Dependent on
500 million small farms in developing countries with very low income

Green Revolution had mixed results..
• In Africa, mostly unsuccessful
• In India, increased yields, but rising input costs, declining soil fertility

Indiscriminate use of technology partially responsible for current agrarian crisis
Agricultural Extension
Dissemination of expert agricultural information to farmers

Training & Visit: Face-to-face interactions of extension officers and farmers

500,000 extension officers in developing countries

Extension agent-to-farmer ratio:
1:2,600 in South Asia
1:1,800 in Sub-Saharan Africa

High recurring costs, weak accountability, under-resourced, limited training

digitalGREEN
Information Sources for Farmers in India

Main source of information about new technology and farm practices over the past 365 days (India: NSSO 2005)
Digital Video for Extension

Video provides...

– Resource-savings: human, cost, time
– Accessibility for non-literate farmers
Early Experimentation
Parameters Varied

- Background of actors in video
- Types of content
- Location
- Methods of dissemination
- Degree of mediation
- Background of mediator, etc.

Over 200 days of surveys, ethnographic investigation, and iterative design
Digital Green: Early Results

7 times more adoptions over Training & Visit model

Mediation

Repetition (and novelty)

Integration into existing extension operations

Social homophily between mediator, actor, and farmer

Desire to be “on TV”

Trust built from identities of farmers and villages in videos

15 months:
13 villages, 3 nights a week, 1,000 regulars
Cost-Benefit

<table>
<thead>
<tr>
<th>System</th>
<th>Training &amp; Visit</th>
<th>Digital Green</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost</strong> (USD)</td>
<td><strong>Adoption (%)</strong></td>
<td><strong>Cost/Adoption (USD)</strong></td>
</tr>
<tr>
<td>$840</td>
<td>11%</td>
<td>$38.18</td>
</tr>
<tr>
<td>$630</td>
<td>85%</td>
<td>$3.70</td>
</tr>
</tbody>
</table>

Note: Decreasing amortized cost of hardware with time and scale

digitalGREEN is at least 10 times more effective per dollar spent than a Training & Visiting system
Analytics

Key Statistics

<table>
<thead>
<tr>
<th>Total number of dissemminations</th>
<th>Total distinct persons attending disseminations</th>
</tr>
</thead>
<tbody>
<tr>
<td>94176 disseminations</td>
<td>101544 persons</td>
</tr>
<tr>
<td>Average dissemminations per day</td>
<td>Average attendance per dissemination</td>
</tr>
<tr>
<td>86.00 disseminations/day</td>
<td>14.18 persons/dissemination</td>
</tr>
</tbody>
</table>

Graphs

Geographic distribution of Disseminations

Disseminations held per Month

Absolute Attendance & Interest Line Graphs

Disseminations per Practice

analytics.digitalgreen.org
Purpose: Promotion of key agri-practices
Pilots (Feb- Aug 2012): Kore & Kofele, 8 videos developed
Timeline: December 2012- December 2013
Geography: Oromia region
Scale: 7 Weredas, 35 Kebeles, 105 Villages, 3150 Viewers
Topics: Agri-practices on Rain Water Pump, Garlic and potato plantations
Purpose: Integrating the DG extension method to the government’s extension system

Geography: Gumer, SNNPRS and Negele Arsi, Oromia

Scale: 2 Weredas, 6 Farmer Training Centres

Topics: Agri-practices on crops such as Teff, Wheat

Viewers: Groups of small and marginal farmers

Community Mediators: Government Development Agents
Alliance for Green Revolution in Africa (AGRA)

• Integrate Digital Green model into the existing extension systems of Faida Market Link (FML) in Tanzania and Ministry of Agriculture (MoA) in Ethiopia
• Focus will be on soil health practices to complement AGRA integrated program
• 15 villages in each country: Ethiopia & Tanzania
• Visit countries: Ghana & Mozambique
World Cocoa Foundation CLP Project

Background & Project details

**Purpose:** Improving livelihoods of cocoa farmers in Ghana by application of an innovative ICT enabled extension method

**Scale:** 24 communities, 1000 farmers, 18 videos

**Project duration:** July 2012 – June 2013

**Partners:** World Cocoa Foundation, ACDI/VOCA & COCOBOD
Public Health in Low Income States

Purpose:
Participatory video and mediated instruction to promote key nutrition, maternal and child health behaviors

Projects:
PATH & SPRING
PATH: Maternal and Child Health & Nutrition

- **Project start:** July 2012
- **Location:** Rae Bareilly, Uttar Pradesh, India
- **Partners:** PATH and Grameen Vikaas Sansthan (GVS)
- **Operations:** 27 villages
- **Topics:** Maternal & Child Health, Nutrition & Family Planning
- **Viewers:** Pregnant and lactating mothers, other key influencers of behaviors
- **Community Mediators:** Accredited Social Health Activists (ASHAs)
Strengthening Partnerships, Results & Innovations in Nutrition Globally (SPRING)

• **Purpose:**
  – To **adapt** the Digital Green community video model currently used for promoting new or improved agricultural practices for the promotion of nutrition and hygiene behaviors
  – To **test the feasibility** of the adapted model, to document results, and (if successful), to make recommendations about how to take the model to scale.

• **Project start:** September 2012
• **Location:** Keonjhar, Odisha, India
• **Partners:** SPRING and VARRAT
• **Operations:** 30 villages
• **Topics:** Nutrition & hygiene behaviors
Thank you
Initial assessment

$243 incremental increase in farmer income over 8 months

- June 10: Chili Nursery Raising, Beans Line Sowing
- July 10: Chili Line Sowing, Beans Fertilizer Application
- August 10: System of Rice Intensification
- September 10: Bitter Gourd Pest & Ginger Rot Management
- October 10: —
- November 10: Potato Line Sowing, Tomato Intercropping
- December 10: Improved Onion Seed
- January 11: Improved Poultry Rearing