Scaling the Uptake of Agricultural Innovations: The role of sustainable extension and advisory services

Scaling Agricultural Technologies
Global Learning Evidence Exchange
7 January 2014
Bangkok, Thailand

Brent M. Simpson
Michigan State University
Deputy Dir. Modernizing Extension and Advisory Services (MEAS) Project
Key Questions

- How do we *define* scale when thinking about the adoption of agricultural technologies and practices?
- How do we *design* for maximizing the potential up-take of agricultural innovations?
- How do we *sustain* the momentum of scaling behavior change once it is initiated?
• Birkhauser, Evenson, & Feder report a range of rates of return, most between 13% to 80%
• Alston et al. estimate a median rate of return on extension of 62.9% (focus: staple crops extension)
• Keynan, Olin and Dinar studied farmer payments of bonuses designed to increase quality and responsiveness of extension
  – All the 17 farmer groups paid the bonuses and continued with the program the following year

➢ High rates of return signal under investment
Every innovation has its natural scale of utility

No change is permanent – it’s a process

Source: http://www1.eere.energy.gov/solar/sunshot/seeds_sandia.html
The Diffusion of Innovations

Source: Rogers, 1964
**Process of Adoption**

ADOPTION PROCESS
- Awareness
- Interest
- Evaluation
- Trial (adaptation)
- Adoption

Q: How many dissemination efforts are *explicitly* designed to facilitate individual adoption as part of their theory of change?

Source: Rogers, 1964
Q: How many interventions are designed to allow adoption to take place, let alone takeoff?

Source: Rogers, 1995
Process of Diffusion

INNOVATION CHARACTERISTICS
- Perceived advantage
- Complexity
- Riskiness
- Trialability (lumpiness)
- Observability

Q: How many interventions incorporate the essential characteristics of the innovation into their diffusion strategy?

Source: Rogers, 1963
## Multiple Pathways of Getting to Scale
*(modified from Birner and Anderson, 2007 and others)*

<table>
<thead>
<tr>
<th>Delivery Organization</th>
<th>Public Sector</th>
<th>Private Sector Farmers</th>
<th>Private Sector Companies</th>
<th>NGOs/Donors</th>
<th>FBOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Sector</td>
<td>Public sector extension</td>
<td>FFS provided by public sector</td>
<td>Private companies contract PS</td>
<td>NGOs contract PS</td>
<td>FBOs contract PS</td>
</tr>
<tr>
<td>Private Sector: Companies</td>
<td>Contracting</td>
<td>Fee For Service</td>
<td>Input linked ext., outgrowers</td>
<td>NGOs hire Private</td>
<td>FBOs contract Private</td>
</tr>
<tr>
<td>Private Sector: Individual Providers</td>
<td>Contracts, coupons</td>
<td>FFS, Private Service Providers</td>
<td></td>
<td>NGO hires agents</td>
<td></td>
</tr>
<tr>
<td>Third Sector: NGOs/Contactors</td>
<td>Govt contracts</td>
<td>Farmers pay fees</td>
<td></td>
<td>NGO hires agents, free</td>
<td></td>
</tr>
<tr>
<td>Third Sector: Farmer-Based Organizations</td>
<td>Public support, subsidies for extension</td>
<td>FBO hires agents, FFS</td>
<td></td>
<td>NGO pays agents employed by FBO</td>
<td>Agents hired by FBO providing service to members</td>
</tr>
</tbody>
</table>
Learning Process Approach to Scaling

Effective
Efficient
Scaling-up

Source: Korten, 1980
Scaling the Update of Innovations through Sustainable Agricultural Extension

- Using what we know about human behavior to support behavior change;
- Using what we know about the diffusion of innovations to design interventions that reach their appropriate scale;
- Sustaining efforts long enough to allow ‘scaling’ to happen;
- Working at scale, to achieve impacts of scale;
- Investing in processes and relationships with potential to continually deliver new information, new options, new possibilities.

Not one or another...it’s all, and more.

Applying what we already know is itself an innovation
This presentation was given by:

Brent M. Simpson
Department of Agriculture, Food and Resource Economics,
Michigan State University

on behalf of the Modernizing Extension and Advisory Services (MEAS) Project
Terms of Use:

© Michigan State University and the MEAS project.
This work is licensed under a
Creative Commons Attribution 3.0 Unported License.

Users are free:
• **to Share** — to copy, distribute and transmit the work
• **to Remix** — to adapt the work

Under the following conditions:
• **Attribution** — Users must attribute the work to the *author(s)/institution*
  (but not in any way that suggests that the authors/ institution endorse the user or the user’s use of the work).
Disclaimer:

This presentation was made possible by the generous support of the American people through the United States Agency for International Development, USAID. The contents are the responsibility of the author(s) and do not necessarily reflect the views of USAID or the United States Government.

www.meas-extension.org