Social, cultural and gender-based constraints to adoption

Contexts, solutions and what you can do to improve impact

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Narrative arc

Adoption

Impact

Resolution

Examples

Solutions

Action
Focusing Our Strategy

Building on the previous work of others

Learning from our work to date

Input from experts, partners, grantees, donors, farmers, and critics

Focus on the staple crops and livestock with the greatest impact on the poor
Our theory of how change occurs for farmers

- **Integrated, client-driven Interventions**
  - Research & development, data & statistics
  - Seed systems, extension, financial services, value chains
  - Policy improvement, demand generation, risk mitigation

- **ACCESS**
  - Systems, Services

- **INCENTIVES**
  - Enabling sector and market policies

- **TOOLS**
  - Technologies, Knowledge

**Outcome goal**
- Sustainable productivity growth for smallholders with emphasis on women

**Impact goal**
- Decreased food prices
- Increased farmer income
- Growth in rural economy
- Poverty reduction

**Our resources**
- To be combined with those of others

**Example interventions**
- Toward which resources can be put

**Levers**
- For removing productivity constraints for smallholders

**Primary and secondary pathways**
- Through which productivity growth contributes to poverty reduction

*To be pursued for specific crops/products and geographies (from Opportunity Map)*
Challenges to technology adoption

**Externalities** – Some technologies create spillovers that affect others. If farmer decisions ignore these spillovers then technologies that create benefits for others may not be adopted, while technologies that impose costs on others may be adopted too widely.

**Input and output market inefficiencies** – Problems with infrastructure and with supply chains, compounded by weak contracting environments, make it more costly for farmers to access input and output markets and access the benefits from technology adoption.

**Land market inefficiencies** – In settings where land tenure is weak and property rights insecure, farmers may not have an incentive to invest in beneficial technologies.

**Labor market inefficiencies** – New technologies need different types and timing of labor input. Restrictions on labor mobility and high costs in the labor market will interfere with adoption opportunities.

**Credit market inefficiencies** – Many farmers have difficulty accessing credit and face high interest rates, which prevents investment in profitable technologies. Financial decisions may be difficult for farmers without high levels of financial literacy.

**Risk market inefficiencies** – Technologies that carry a small risk of a loss may not be worth large expected gains if risks cannot be offset. Psychological issues around risky decisions further lower levels of adoption.

**Informational inefficiencies** – If an individual does not know that a technology exists, does not know about its benefits or does not know how to use it effectively, then the technology will not be adopted.
Focus on adoption has generated new thinking and methodological interests

Figure 9.2
Conventional plant breeding is a cyclic process that takes place largely within one or more research stations (left) with the breeder taking all decisions; participatory plant breeding is the same process, but takes place mostly in farmers’ fields (right) and the decisions are taken jointly by farmers and breeders.
(a) Priority setting and innovation processes (supply)

Goal:
Innovations are developed/adopted jointly with users to respond to their needs

Key actors
• Pluralistic agricultural research system
• Pluralistic agricultural education and training system

(b) Demand articulation, access to and adoption of technologies (demand)

Goal:
Users are accessing and adopting improved technologies, are benefiting from them and become part of priority setting

Key actors
• Farmers (women and men)
• Supply chain actors (processors, input suppliers, traders)
• Consumers (women and men)
• Groups, networks, organizations of these actors

Bridging Institutions and other enablers
• Pluralistic extension system (public, private, NGO, POs and other CSOs)
• Institutional and organizational arrangements to facilitate access to information and services
  • ICT, media
• Complementary inputs and services (credit, seed system, input distribution system, physical infrastructure)

Enabling environment
(e.g. policies, legal framework, socioeconomic and political factors)
Poor design may be a supply failure . . .

...but adoption can be simple if demand dictates
Going a layer deeper. . .

Uncovering Culture’s Deep Structure

Above the Surface
Anthropologists observe people’s behavior, the products and services they use, their thoughts, and more…
~the tree’s trunk, limbs, and leaves

Below the Surface
From these observations, anthropologists generate insights into the underlying philosophies, motivations, and cultural foundations for why people do what they do…
~the tree’s roots

2008. Property of Context-Based Research Group
The resource gap between women and men farmers undermines adoption and agricultural impact

Women farmers have less access than men to productive assets

Closing this gender gap could increase yields on their farms by 20–30%, and raise total agricultural output in developing countries by 2.5–4%
Gender provides an important framework for understanding adoption challenges

- Women, typically, have less access to the enablers of adoption:
  - Land
  - Credit
  - Education or information
  - Labor
- Preferences in determining beneficial technologies are distinct

- Women’s preferences are less likely to be taken on board in priority-setting and beta design
  - Not considered farmers
  - Political and time constraints
  - Representation in R & D efforts
Note: The household economy complicates decisions about adoption
Who influences design and who adopts as a result?
Women’s technology preferences align with their household responsibilities

Table 3. Ranking of farmer-preferred traits based on gender criteria, Bankatti Village, Rupandehi District (Terai), Nepal, 1999-2000.

<table>
<thead>
<tr>
<th>Women:</th>
<th>Men:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease resistance</td>
<td>Late heat stress tolerance</td>
</tr>
<tr>
<td>Pest resistance</td>
<td>Large, white grains</td>
</tr>
<tr>
<td>Good chapati-making</td>
<td>Shattering tolerance</td>
</tr>
<tr>
<td>High yield</td>
<td>Disease resistance</td>
</tr>
<tr>
<td>High tillering</td>
<td>Lodging tolerance</td>
</tr>
<tr>
<td>Medium height</td>
<td>Early maturity</td>
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<tr>
<td>White-bold seed</td>
<td>High yield</td>
</tr>
<tr>
<td>Lodging tolerance</td>
<td>Medium height</td>
</tr>
<tr>
<td>Large spikes</td>
<td>Good chapati-making</td>
</tr>
<tr>
<td>Shattering resistance</td>
<td></td>
</tr>
<tr>
<td>Short awns</td>
<td></td>
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Good design processes can increase adoption
Solutions already at work upstream

- Linking farmers into the innovation process
- Training staff on participatory design methods
- Conducting gender analysis of preferences and responsibilities prior to trait prioritization
- Increasing women’s representation in priority setting

Jeanie Borlaug Laube Women in Triticum (WIT) Award for early-career women wheat researchers
Our expectations for good design:

- Analytical research: Know her
- Design measures: Design for her
- Feedback and accountability: Be accountable to her
Thank You