LINKING NUTRITION TO AGRICULTURE AND SOCIAL PROTECTION TO IMPROVE FOOD AND NUTRITION SECURITY

Evidence from IFPRI Research in Bangladesh

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Nutrition-Sensitive Agriculture

Agriculture, Nutrition, and Gender Linkages (ANGeL)
Pathways from Agriculture to Nutrition

- Food output
- Food imports
- Food prices
- Nutrient consumption
- Health care expenditure
- Caring capacity & practices
- Female energy expenditure
- Health status
- Nutrient intake
- Child nutrition outcomes
- Mother’s nutrition outcomes
- National nutrition outcomes

Policy drivers of growth

- Household assets and livelihoods

- Food produced and consumed
- Nonfood output
- Food prices
- Food expenditure
- Non-food expenditure
- Women’s empowerment status
- Health status
- Nutrient intake
- Child nutrition outcomes

Interacting socioeconomic factors

- Interhousehold inequality
- Drivers of “taste”:
- Intrahousehold inequality
- Public health

Policy drivers of inequality

Policy drivers of nutrition
Overwhelming dominance of rice in diet
Share of rice in total nutrient intake

Source: IFPRI 2012 Bangladesh Integrated Household Survey (BIHS)
Most farmers grow one crop – Rice

Source: IFPRI 2012 Bangladesh Integrated Household Survey (BIHS)
ANGeL Project: Background

- IFPRI research in Bangladesh shows:
  - Agricultural diversity increases household and child dietary diversity
  - Women’s empowerment improves household, child, and maternal dietary diversity
  - Women’s empowerment increases agricultural diversity

- **June 2014**: Motivated by research findings, IFPRI developed a concept note for Ministry of Agriculture to strengthen the agriculture-nutrition-gender nexus.

- **October 2015**: Government approved *Agriculture, Nutrition, and Gender Linkages (ANGeL)* project for implementation by Ministry of Agriculture; Honorable Minister Matia Chowdhury launched project on 29 October 2015.
ANGeL project design

- ANGeL is an experimental project in 16 of 64 districts in Bangladesh.
- IFPRI evaluates impacts of 3 interventions and their 5 combinations using clustered RCT method. Interventions are:
  - **Agricultural Production** training to farm HHs (men and women, together)
  - **Nutrition BCC** training to farm HHs (men and women, together)
  - **Gender Sensitization** activities for farm HHs (men and women, together). Designed to improve status of women and gender parity between women and men.
- ANGeL Project draws on the government’s **nationwide agricultural extension network**, ‘topping-up’ their portfolio with nutrition activities and messages.
ANGeL – Way forward

- After 2 years, the ANGeL experimental research will identify which interventions most effectively increase agricultural diversity, increase farmers’ income, improve nutrition, and promote women’s empowerment.
- The Ministry of Agriculture plans to use the research-based evidence to scale up the most effective interventions all over Bangladesh.
- ANGeL is the first ministry-led initiative that uses a rigorous impact evaluation, the randomized controlled trial (RCT), to develop an evidence base to design and implement a national program.
Social Protection in Bangladesh

What role for improving nutrition?
Percentage distribution of safety net programs by FY2016 SSN budget allocation: $3.4 billion, 12% of national budget

Top 10 programs account for 62% of total budget

- Open Market Sales: 10.3%
- Food for Work: 8.8%
- Test Relief: 7.4%
- Vulnerable Group Feeding: 7.0%
- Employment Generation Program for the Poor: 7.0%
- Primary Education Stipend: 5.4%
- Old Age Allowance: 5.3%
- Vulnerable Group Development: 5.0%
- Allocation for various programs: 4.7%
- Secondary School Stipend: 3.8%

Other programs (not shown on the chart):
- One Household One Farm: 3.1%
- School Feeding Program: 2.7%
- Fund for climate change: 2.3%
- Revitalization of Community Healthcare Initiative: 2.3%
- Honorarium for Freedom Fighters: 2.2%
- Allowances for Destitute Women: 1.9%
- National Service: 1.8%
- Social Development Foundation: 1.6%
- Gratuitous Relief: 1.5%
- Rural Employment and Road Maintenance Program: 1.5%
- Food Assistance for Chittagong Hill Tracts: 1.4%
- Residence for poor freedom fighters: 1.4%
- Maternal, Child and Adolescent Health: 0.8%
- Ashrayan-2 Project: 0.7%
- Economic Empowerment of Poor (EEP): 0.7%
- Allowance for Disabled: 0.5%
- Disaster Management: 0.5%

Source: General Economics Division, Ministry of Planning
Distribution of all safety net participants by income groups

IFPRI BIHS data

<table>
<thead>
<tr>
<th>Per capita expenditure quintile</th>
<th>Percentage of all participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (poorest)</td>
<td>28.8</td>
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<tr>
<td>2</td>
<td>23.7</td>
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<tr>
<td>3</td>
<td>21.2</td>
</tr>
<tr>
<td>4</td>
<td>17.1</td>
</tr>
<tr>
<td>5 (richest)</td>
<td>9.3</td>
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</tbody>
</table>
Limited impact of safety nets on nutrition

Most existing evidence from evaluations (by IFPRI and others) of major safety nets in Bangladesh show reduced household poverty and improved food security but few improvements in child nutritional status.

This leads to two key questions:

1. Are large-scale social protection interventions that increase resources sufficient to improve child nutrition?
2. Are there constraints other than resources, such as nutrition knowledge, that also need to be addressed?

This is one of the focal set of issues addressed by the Transfer Modality Research Initiative (TMRI) in Bangladesh.
IFPRI’s TMRI research shows safety net cash transfer + nutrition BCC has greatest impact on child nutrition

- IFPRI designed an experimental (RCT) program in Bangladesh called the Transfer Modality Research Initiative (TMRI).

- WFP implemented TMRI from 2012 to 2014 to determine what combination of cash, food, and nutrition behavior change communication (BCC) in safety nets brings the greatest benefits for ultra-poor rural households.

- Cash + nutrition BCC led to a 7.3 percentage points decrease in child stunting over the project period—almost three times greater than national average decline in stunting.

In TMRI, child stunting reduced by 7.3 percentage points in two years

- Control: 46.0%
- Cash + BCC: 38.7%
All TMRI modalities significantly increased household diet “quantity” and “quality”: Adding BCC gives a greater impact.
Adding BCC to safety net cash transfers increases children’s diet diversity
(RCT with DID impacts relative to control, significant at ≤10% level)

Source: Ahmed et al. 2016 (IFPRI and WFP)
Policy Considerations
Policy considerations

Accelerate agricultural diversity:

- **Reduce risk** of high-value, high nutritive value food production via contract farming, agricultural credit, etc.
  - Year-to-year price fluctuations are much larger for non-rice crops than for rice, indicating relatively high levels of market-induced risks for production of non-rice crops
  - High-value crops, especially fruits and vegetables, have thin domestic markets owing to relatively low levels of demand for them
  - Horticultural crops, milk, and fish also face special problems related to perishability, which increases the risks of marketing
  - The interplay of these factors contributes to the low level of agricultural diversity in Bangladesh.

- Create an **enabling policy environment** for the private sector for agricultural value chains development

- Promote **rice intensification and agricultural diversification** via agricultural extension
Policy considerations

Improve diet quality:
- Develop **value chains for nutrient-dense foods**
- Promote **nutrition knowledge** among consumers, farmers, and women and men
  - Add nutrition BCC to social protection programs

Improve adolescent girls’ nutrition:
- Consider introducing **school feeding program in secondary school**

Support women’s empowerment:
- Women’s empowerment in agriculture improves dietary diversity, increases agricultural diversity, and helps households move out of poverty. Therefore, **promoting women’s empowerment remains paramount** to attain complementary development goals in Bangladesh.
Policy considerations

Revamp social protection to reach the most vulnerable to improve their food security and livelihoods:

- Improve the targeting performance
- Integrate nutrition BCC into social safety nets
- Introduce school feeding program in secondary school
- Scale up effective programs
- Phase out high-cost, inefficient programs
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Thank you