



Agriculture, Nutrition, and Gender Linkages (ANGeL) Outcome Brochure

Background

IFPRI's 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; and
- Nutrition behavior change communication (BCC) improves dietary diversity and child nutritional status.

What is ANGeL?

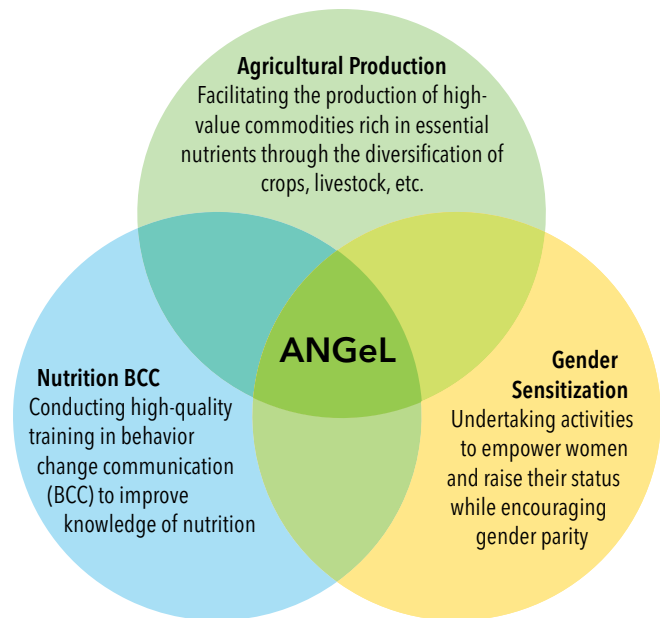
Motivated by these findings, IFPRI designed an innovative research program called "Orienting Agriculture toward Improved Nutrition and Women's Empowerment," or the Agriculture, Nutrition, and Gender Linkages (ANGeL) Project. ANGeL was a 3-year initiative that aimed to identify actions and investments in agriculture to promote agricultural diversity, increase farm household income, improve nutrition, and empower women.

ANGeL was supported by the Government of Bangladesh, the U.S. Agency for International Development (USAID), and the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), designed and evaluated by IFPRI's Bangladesh Policy Research and Strategy Support Program (PRSSP), and implemented by the Bangladesh Ministry of Agriculture.

Design

Using a randomized controlled trial method, IFPRI-PRSSP evaluated ANGeL's impact for 5 combinations of 3 types of interventions for promoting nutrition- and gender-sensitive agriculture.

Government agriculture extension agents known as sub-assistant agricultural officers (SAAOs) and female community nutrition workers, or ANGeL Pushti Kormis



(APKs), facilitated agricultural production and nutrition BCC trainings for 3,125 farm households (men and women, together) in 16 districts across rural Bangladesh.

Helen Keller International (HKI) facilitated the Nurturing Connections gender sensitization trainings. These highly interactive sessions focus on gender relations, power dynamics, communication, and empowerment.

| Treatment (T) and Control Arms | Trainer |
|---|-----------|
| T1: Nutrition BCC | SAAO |
| T2: Nutrition BCC | APK |
| T3: Agricultural Production | SAAO |
| T4: Nutrition BCC + Agricultural Production | SAAO |
| T5: Nutrition BCC + Agricultural Production + Gender Sensitization* | SAAO+HKI* |
| Control (no interventions) | N/A |

*HKI facilitated the gender sensitization trainings only.

ANGeL's design addresses two important aspects of the National Agricultural Policy 2018:

- Encouraging crop diversification and production of crops with greater nutrition-value
- Empowering women, encouraging their participation in production and marketing for income generation, and ensuring their nutritional status for improving food and nutrition security



Nutrition Knowledge & Impacts

Although women and men participated in the trainings together, increases in nutrition knowledge were far greater for women than men. These increases were also greater when trainings were combined (for example, agriculture + nutrition, or agriculture+nutrition+gender). This knowledge improved nutrition outcomes, with increases in household diet quality and child dietary diversity over the project period.

IFPRI's impact evaluation involved two rounds of comprehensive household surveys. The first, conducted before the start of project activities, created a baseline. The follow-up survey (endline) was conducted 24 months later, shortly after the second year of project activities ended.

Results

Over the 17-month implementation period, ANGeL generated useful lessons on strengthening the agriculture nutrition-gender nexus in the country. ANGeL's results are encouraging: with only training, and no physical inputs provided (seed, fertilizer, food basket, etc.), most ANGeL households successfully applied their knowledge for better agricultural production practices, feeding practices, and intrahousehold relationships.



Agriculture Knowledge & Impacts

Both men and women benefited from agricultural trainings, yet women learned more from the same trainings. Crop diversity increased substantially in homestead gardens, mainly due to ANGeL's emphasis on homestead food production from nutritious crops. Farmers also adopted improved production practices. The study consistently found that women were more likely to apply knowledge gained from agricultural production trainings to adopt various improved agricultural production practices, such as pest and disease control, improved seed production, and use of quality fertilizer.

Milestone

Timeline

| | |
|------------------------------------|-------------------------|
| IFPRI presents concept to ministry | June 2014 |
| Project Launch | Oct 2015 |
| Baseline survey | Nov 2015-Jan 2016 |
| Training of trainers | April-May 2016 |
| Implement household trainings | July 2016-December 2017 |
| Endline survey | Jan-March 2018 |

Women's Empowerment

Combining agriculture, nutrition, and gender sensitization trainings produced the greatest improvements in empowerment. ANGeL's household approach empowered women and men in unique ways: while women became more empowered in asset ownership and income decisions, men became more empowered in production and income decisions in select interventions. Both men and women's attitudes related to gender improved, with more women recognizing that they make important contributions to their communities.

Way Forward

The Ministry of Agriculture will use ANGeL results to:

- Identify which interventions most effectively increase agricultural diversity, improve nutrition, and promote women's empowerment; and
- Scale up the most effective interventions all over Bangladesh.



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