



ABOUT BANGLADESH

Bangladesh, one of the world's most densely populated countries, is located on a low-lying delta, vulnerable to various weather-related hazards. Despite these challenges, Bangladesh has nevertheless made substantial progress in reducing poverty, supported by sustained economic growth. Bangladesh is also making progress in child nutritional status. According to the Bangladesh Demographic and Health Survey 2011 and 2014, stunting has declined from 43 percent to 36 percent, wasting has modestly dropped from 17 percent to 14 percent, and underweight has also decreased 41 percent from 33 percent. Despite these gains, a recent joint study by Imperial College London and the World Health Organization indicates that obesity is an emerging concern in Bangladesh: obesity has increased among boys from 0.03 percent in 1975 to 3 percent in 2016. Similarly, obesity has increased from almost nil four decades ago to 2.3 percent among girls for the same time period.

Accelerated urbanization, demographic transition, and globalization are causing major shifts in dietary patterns and lifestyle choices. Bangladesh's rapid transition in food systems, food safety, dietary diversity, markets, and health issues made this a natural focus of the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH).

ABOUT A4NH

A4NH, led by the International Food Policy Research Institute (IFPRI), is designed to fill the existing gap between agricultural development and its unfulfilled health and nutritional benefits. Within CGIAR, A4NH is an integrated program focusing on the system-level outcome to improve food and nutrition security for health. To explore nutrition and health impacts, the program begins with consumption—of healthy, affordable, and safe foods—rather than with agricultural production alone.

A4NH IN BANGLADESH

Bangladesh is an A4NH focus country, along with Vietnam, Ethiopia, India, and Nigeria. In Bangladesh, its work is coordinated by IFPRI, with support from A4NH Managing Partners HarvestPlus and Wageningen University and Research. A4NH's work in Bangladesh is focused on four of the program's five research flagships: Food Systems for Healthier Diets (Flagship 1), Biofortification (Flagship 2), Food Safety (Flagship 3), and Supporting Policies, Programs, and Enabling Action through Research (Flagship 4).



Market: IFPRI/Md Shamsul Alam

Flagship 1: Food Systems for Healthier Diets

Under the leadership of Wageningen University and Research, Flagship 1 responds to concerns about global diet trends and demands from countries on how to transform sustainable and systemic food system transformations for healthier diets to address unabated problems of undernutrition, micronutrient deficiencies, and overnutrition. A4NH concentrates on urban food consumption. This is a complex process, as rural areas have producers and consumers, while most urban households are only consumers, and consumable items offer more complex choices and multiple access points for purchases and choices. A4NH examines food policy research, with a baseline survey of the food system-related policies in Bangladesh. The results of this baseline will provide a snapshot of the current policy context around food systems in Bangladesh and enable documentation of the changes in views and perceptions of the key actors around this agenda.

Flagship 2: Biofortification

Flagship 2, led by HarvestPlus, works with the Bangladesh Rice Research Institute (BRRI) and the International Rice Research Institute in developing and promoting zinc rice. So far, seven zinc-biofortified rice varieties have been released with high yield and beneficial agronomic traits desired by farmers. Among the seven varieties, four were released by BRRI, one hybrid and one inbred variety by Bangabandhu Sheikh Mujibur Rahman Agricultural University and another inbred variety by Bangladesh Institute of Nuclear Agriculture.

For promotion and delivery of zinc rice, HarvestPlus works with about 30 partners from the public, private and civil society sectors, including

the Department of Agricultural Extension under the Ministry of Agriculture, BRRI, Bangladesh Agricultural University, 25 local NGOs, World Vision, and over 350 small and medium-sized seed companies. In 2016 alone, HarvestPlus and partners have delivered the seeds of four zinc rice varieties to almost half a million farming households across 62 of the 64 districts in the country.

HarvestPlus aims to reach at least one million Bangladeshi farming households with biofortified zinc rice seed by the end of 2018¹. Several demand creation activities, such as farmers' field days, school programs, and folk song performances, are planned to reach farming communities across the country.

In terms of research, HarvestPlus is working with the Federal Institute of Technology of Switzerland, BRAC University, the University of California-Davis and BRRI, to assess the retention, consumer acceptability, bioavailability and efficacy of zinc rice. The results of these studies will be available in early 2019. In 2018, HarvestPlus will also implement a study to assess the adoption and diffusion rates of zinc rice varieties, and to shed light onto the drivers and barriers to their scale up.

Flagship 3: Food Safety

This Flagship Program, led by the International Livestock Research Institute, addresses challenges related to the growing need to better understand food safety solutions that can work in informal or formalizing markets. There is an urgent need for technical and institutional solutions, and broader policy and regulatory approaches to manage food safety risks in an equitable manner in dynamic food markets like Bangladesh. This research will be closely integrated into the



Field: HarvestPlus

¹ HarvestPlus Product Development and Delivery Plan 2013

overall food systems approach under Flagship 1: Food Systems for Healthier Diets.

Risks in informal markets for nutrient-rich perishables like meat, milk, fish, and vegetables are particularly important owing to changing consumer preferences and market structures. Flagship 3 aims to make government programs mainstream food safety and health related to chemical contamination, metals, and anti-microbial resistance; as critical issues in production and consumption. With intensive collaboration with the Bangladesh Food Safety Authority (BFSA), A4NH is looking at food safety issues related to knowledge generation, policy analysis, and advocacy. The flagship aims to analyze policies and mechanisms (food safety laws and institutions) that can meet the food safety delivery and occupational health needs of evolving food systems.

Flagship 4: Supporting Policies, Programs, and Enabling Action through Research (SPEAR)

Nutrition and agriculture are directly linked, but in many low- and middle-income countries, where a high dependence on agriculture-based livelihoods coexists with a high burden of undernutrition, there is a disconnect between agriculture and nutrition. The many links between agriculture and nutrition suggest that agricultural policies, interventions, and programs can be better designed to enhance nutrition and health benefits.

In Bangladesh, SPEAR is led by IFPRI. One of the pioneer project is ANGeL, a pilot project (2015–18), designed by IFPRI and implemented by the Ministry of Agriculture, aims to identify actions and investments in agriculture that will help to improve nutrition and empower women. The Ministry of Agriculture will use ANGeL data to (1) identify which interventions most effectively increase agricultural diversity, improve nutrition, and promote women's empowerment; and (2) scale up the most effective interventions all over Bangladesh." ANGeL is the first ministry-led initiative in Bangladesh to use evidence from a randomized controlled trial to design a national program.

Under Flagship 4, SPEAR aims to leverage agriculture for nutrition, which involves (a) making agricultural programs more nutrition-sensitive and more effective in improving nutrition and health, (b) creating and strengthening policy environments that enable agriculture to support nutrition and health goals, and (c) developing capacity and leadership to use evidence-informed decision making to enhance the impact of agriculture on nutrition and health.

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