



INTERNATIONAL
FOOD POLICY
RESEARCH
INSTITUTE

HIGHLIGHTS OF RECENT

IFPRI food policy research

for the **BILL & MELINDA
GATES FOUNDATION**



2014

Reducing Poverty and Hunger
through Food Policy Research

Foreword

In the wake of the food crises of the early 1970s and the resulting World Food Conference of 1974, a group of innovators realized that food security depends not only on crop production but also on the policies that affect food systems, from farm to table. The International Food Policy Research Institute (IFPRI) was founded in 1975 and for the past four decades has worked to provide solid research and evidence for policy options to partners in donor and recipient countries.

Agriculture and rural development play a critical role in alleviating poverty and undernutrition. In a February 2012 speech, Bill Gates affirmed: “If you care about the poorest, you care about agriculture. Investments in agriculture are the best weapons against hunger and poverty, and they have made life better for billions of people. The international agriculture community needs to be more innovative, coordinated, and focused to help poor farmers grow more. If we can do that, we can dramatically reduce suffering and build self-sufficiency.”

Working with many longstanding partners, such as the Bill & Melinda Gates Foundation, IFPRI conducts research that puts this vision into action every day, focusing on sustainable agricultural growth, investment in agricultural research, provision of safety nets to strengthen resilience, prioritization of nutrition interventions for women and children, property rights and management of natural resources, and much more. IFPRI and its partners help to improve programs and initiatives for vulnerable people. By serving as a trusted voice on food policy issues, IFPRI helps to change mindsets and provide evidence on how to improve food and nutrition security.

Together, IFPRI and the Gates Foundation have supported cutting-edge research and set measurable targets for increasing agricultural productivity. Agricultural research is a good investment: every US\$1 invested in research by CGIAR—a global agriculture research partnership of which IFPRI is a member—yields approximately \$9 of additional food in the developing world. This brochure highlights some of the key collaborations between IFPRI and the Bill & Melinda Gates Foundation.



Improving Nutrition and Health in Vulnerable Countries

HarvestPlus

MOTIVATION

Can one seed change the world? We think so—an improved single seed variety can mean the difference between sight and blindness for millions of malnourished children. Since 2004, HarvestPlus has been working to combat micronutrient malnutrition, also known as “hidden hunger,” which afflicts billions of people worldwide. This deficiency in essential minerals and vitamins can be devastating: in addition to causing blindness, it can stunt children’s physical and mental development, increase vulnerability to infectious diseases, and even lead to premature death.

Alongside 70 partner organizations in more than 40 countries, HarvestPlus has sought to reduce micronutrient malnutrition through biofortification: breeding staple crops to achieve a higher content of crucial micronutrients. HarvestPlus, generously supported by the Bill & Melinda Gates Foundation, along with other

donors, targets crops widely consumed by the poor and malnourished in Africa and Asia to achieve a greater impact among the most afflicted populations. Specifically, HarvestPlus is biofortifying beans, pearl millet, cassava, maize, sweet potato, rice, and wheat with one of three nutrients—provitamin A, iron, or zinc—to help reduce micronutrient malnutrition in developing countries around the world.

OUTCOMES

HarvestPlus and partners have now reached 500,000 farmers with nutritious varieties of staple food crops that include the crops noted here. During the next five years, HarvestPlus plans to disseminate nutritious staple food crops to people in target countries including Bangladesh, the Democratic Republic of Congo, Ethiopia, India, Nigeria, Pakistan, Rwanda, Uganda, and Zambia. The goal is to reach 50 million farmers by 2018. An overview of these efforts, including our 2014 plans, is as follows:

- **Sweet potato:** Vitamin A orange sweet potato was first disseminated in Mozambique and Uganda with positive results. Adoption of the new variety increased by over 60 percent in both countries, while vitamin A intake for women and children doubled in Mozambique, nearly doubled for younger Ugandan

children and women, and increased by two-thirds for older Ugandan children. The program is now being scaled up in many countries in Africa by the International Potato Center (CIP) and others in order to reach millions more people in the coming years. In Uganda alone, HarvestPlus has now reached over 145,000 farming households with orange sweet potato.

- ▶ **Cassava:** The Nigerian government released three vitamin A cassava varieties in 2011. National dissemination of the varieties was formally launched in July 2013 as part of the Agricultural Transformation Agenda of the Federal Government of Nigeria. The goal is to reach more than 100,000 Nigerian farming households by 2014. HarvestPlus is also disseminating vitamin A cassava in the Democratic Republic of Congo.
- ▶ **Maize:** Three vitamin A maize varieties were released in Zambia and two were released in Nigeria during 2012. Research shows that the vitamin A in maize is highly bioavailable. A study also found that consumers accept the orange maize once they understand that the color is due to the presence of high levels of vitamin A, which is enormously beneficial for their children's health. The dissemination target is to have 265,000 farming households growing and consuming vitamin A maize in 2014 in Zambia alone.
- ▶ **Beans:** Iron beans have reached more than 270,000 farming households (or 15 percent of rural farmers) in Rwanda, where five varieties have been released, and 175,000 households in the Democratic Republic of Congo, where seven varieties have been released. In Rwanda, the World Food Programme is now including iron beans in its Purchase for Progress program. HarvestPlus has also introduced iron beans in Uganda.
- ▶ **Pearl millet:** An iron pearl millet variety was commercialized in India in 2012, thanks to a partnership with private-sector company Nirmal Seeds, and has reached over 25,000 farming households. A study published in 2013 in the *Journal of Nutrition* showed

that iron pearl millet can fully meet the daily iron and zinc requirements of young Indian children.

- ▶ **Rice:** HarvestPlus submitted five zinc rice varieties to the official registration trial in Bangladesh and submitted four zinc wheat varieties to the Participatory Variety Selection on-farm trials in India. The first zinc rice variety has now been released in Bangladesh and will be available to farmers in 2014.
- ▶ **HarvestPlus** has been instrumental in helping to establish nationally owned biofortification programs in Brazil, China, India, and Panama.

Tackling the Agriculture-Nutrition Disconnect in India

MOTIVATION

One third of the world's malnourished children live in India. Progress in reducing undernutrition is disturbingly sluggish when compared to the rate at which the Indian economy has grown in recent years. Given that agriculture employs more than half the Indian workforce—and is an especially important source of livelihoods in poorer rural areas—the sector could and should play a larger role in reducing undernutrition in the country.

What lies behind the enduring paradox of persistent undernutrition in a rapidly growing economy? How can we bridge the agriculture-nutrition disconnect? Addressing such concerns was the primary goal of the TANDI project: Tackling the Agriculture-Nutrition Disconnect in India. The project aimed to better understand and address the failure of sustained economic and agricultural growth to reduce malnutrition rates in India. Over an 18-month period from 2010–2011, TANDI, with support from the Bill & Melinda Gates Foundation, sought to generate a broad-based consensus on the nature of the “agriculture-nutrition disconnect” in India and to develop improved strategies for leveraging more nutritional impact from agricultural growth.



OUTCOMES

- TANDI influenced the policy dialogue in India by identifying important ways for the agriculture sector to become more nutrition-aware and help accelerate the reduction of undernutrition in India.

Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India

MOTIVATION

The persistence of undernutrition in the face of India's impressive economic growth is an enormous concern. Although it is now clear that direct interventions must be delivered at scale in order to achieve rapid reductions in child undernutrition, less than 55 percent of all the Indian mothers and children who should be receiving these services are actual recipients of these essential health and nutrition interventions.

Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India (POSHAN) is a four-year initiative that builds evidence on effective ways to improve nutrition and supports the use of this evidence in decisionmaking. It is supported by the Bill &

Melinda Gates Foundation and led by IFPRI in India, in collaboration with the Institute of Development Studies in the United Kingdom and the Public Health Foundation of India. POSHAN aims to build upon the existing knowledge base to spur action on nutrition in India and, as part of this work, brings together diverse stakeholders from varied contexts within the country.

ONGOING WORK AND OUTCOMES

In 2012, the POSHAN team, based primarily at the IFPRI-New Delhi office, completed a review of nutrition programs and policies in India in order to compile lessons learned on how to deliver large-scale, evidence-based interventions within the country. The project team also completed a stakeholder mapping exercise and held a substantial national consultation in mid-2012 to share these findings.

During a 2013 meeting, the Government of Uttar Pradesh cited POSHAN research. This reference was captured within the minutes of the technical committee review of their state-level nutrition mission and vision document.

Alive & Thrive

MOTIVATION

Alive & Thrive, funded by a Gates Foundation “learning grant,” is designed to combat global child undernutrition through the promotion of infant and young child feeding practices. Alive and Thrive’s work was initiated in Bangladesh, Ethiopia, and Vietnam. IFPRI’s role is to evaluate the impact of this six-year initiative on undernutrition and infant and young child feeding practices in all three countries.

ONGOING WORK

- ▶ Baseline surveys generated rich data on the context of undernutrition in these three countries and provided benchmarks for measuring the results of the project’s activities. The baseline surveys and some of the process evaluation research results have been disseminated in each of the countries and at various conferences.
- ▶ The tools and questionnaires IFPRI developed for the baseline surveys have been used or adapted by other researchers and countries.
- ▶ Evaluating the impact of the project’s policy and advocacy component on policy landscapes and processes in each country is a significant innovation, and project leaders expect to make substantial contributions to the field of nutrition policy process research.

Aflatoxins in Maize and Groundnuts

MOTIVATION

Aflatoxins are naturally occurring carcinogenic substances found in high quantities in some of Africa’s crops. They spread rapidly in warm tropical climates, inflicting harm on both humans and animals. However, farmers will not adopt practices that reduce aflatoxins unless they are paid a premium; millers will not pay farmers a premium unless they can test maize for aflatoxin contamination and have assurances that consumers will pay



extra for improved quality; and consumers will not pay more unless they can be confident that they are purchasing safer maize. The Aflacontrol project, supported by the Bill & Melinda Gates Foundation, analyzed groundnut and maize value chains in Mali and Kenya to investigate means of reducing aflatoxins.

In particular, the project used empirical evidence to assess whether developing-country technologies could reduce the risk of aflatoxin contamination in a cost-effective manner—especially for poor farmers—and what obstacles prevented farmers from adopting these technologies. The evidence collected can be used to help farmers to produce aflatoxin-free crops and to improve market access for poor farmers in Africa south of the Sahara. The establishment of a market for aflatoxin-tested maize would complement these efforts by creating an incentive for farmers to adopt aflatoxin-reducing practices.

OUTCOMES

- ▶ The Aflacontrol team completed the first comprehensive study of aflatoxin prevalence levels in more than 10,000 samples of Kenyan maize and Malian groundnuts. The project results have received wide attention from the media, particularly in Kenya, which has helped prompt the Kenyan government to engage in discussions about Aflacontrol strategies.
- ▶ The team completed its first comprehensive socioeconomic analysis, which includes an assessment of the livelihood impacts of aflatoxins on health, wealth, and trade; the behavioral factors that affect agricultural technology adoption and whether people are willing to pay higher premiums for aflatoxin-free certified products; and the cost-effectiveness of different

aflatoxin control methods. This information has helped shape the focus of the Bill & Melinda Gates Foundation's approach to aflatoxin control.

- The Aflacontrol team collaborated with the Bill & Melinda Gates Foundation's agriculture team and provided valuable data and feedback to develop a broad consortium to address aflatoxin contamination comprehensively in Africa south of the Sahara.

Supporting Evidence-Based Agricultural Policy

HarvestChoice

MOTIVATION

Breaking the cycle of poverty and hunger in the developing world depends largely on agricultural development and innovation. For this reason the Bill & Melinda Gates Foundation, through its Global Development Program, highlights agriculture as a primary investment target.

Determining which agricultural investments achieve the greatest impact depends on reliable data and analysis. HarvestChoice generates data, tools, and knowledge products to guide the investments, primarily in Africa south of the Sahara, that improve smallholder livelihoods. A hallmark of the HarvestChoice approach is the use of spatially explicit data, such as geographic and topographic data, complemented by a data-access portal designed to better represent the wide range of farming systems and farm households across the region. Through the HarvestChoice portal, investors, policymakers, and researchers can better identify and target agricultural interventions in Africa south of the Sahara.

ONGOING WORK AND OUTCOMES

- The program produced data and analytical inputs that supported both the Gates Foundation's Agricultural Development Program Strategy Review in early

2010 and the revision of the foundation's Agricultural Development Strategy in early 2011. Currently, HarvestChoice develops and operates productivity models and poverty projections to support the foundation's efforts to target agricultural investment across countries, farming systems, and commodity value chains.

- HarvestChoice tools are increasingly being recognized. Widely used datasets include the Spatial Production Allocation Model, which disaggregates crop production statistics; and subnational poverty mapping, which provides internationally comparable poverty measures that are computed using national household surveys for 24 countries.
- The program harmonized household survey and census data to build a database that compares socio-demographic, agricultural, and livestock variables across countries.
- HarvestChoice produces a series of country briefs that analyze and summarize country data to provide an overview of agricultural production, sales, household and farm structure, livestock, inputs, management practices, and farm assets. These non-technical briefs provide basic socio-demographic and agricultural statistics on selected countries in Africa and offer a



comprehensive view of agricultural and livestock characteristics across countries.

- ▶ HarvestChoice collaborated with the International Maize and Wheat Improvement Center (CIMMYT) to estimate the potential suitability and profitability of expanding wheat production in Africa. This provided the basis for a high-level policy discussion at the Conference of African Ministers of Agriculture and Trade in 2012 that resulted in the declaration of wheat as one of the future strategic food security crops for Africa.
- ▶ The program produced prototypes of agricultural research, development data, and knowledge-sharing platforms for the New Alliance for Food Security and Nutrition of the Group of Eight (G8) as well as the Agricultural Research Investment Planning of the Comprehensive Africa Agriculture Development Programme (CAADP). HarvestChoice also collaborates with the Gates Foundation's Global Development Program to ensure that both the CGIAR's and the Foundation's agricultural investment data models are compatible and enrich each other.

Meeting Knowledge and Capacity Needs

Regional Strategic Analysis and Knowledge Support Systems

MOTIVATION

The Comprehensive Africa Agriculture Development Programme (CAADP) aims to boost investments in agriculture and improve the quality of agriculture-sector governance. As more countries design and implement agricultural investment plans as part of the CAADP agenda, they will need high-quality data to track the progress of their implementation and analytical capacity to evaluate their policy options.

The program, supported by the Bill & Melinda Gates Foundation, seeks to ensure sufficient capacity at the

country and regional levels to meet CAADP's analytical and knowledge needs. To this end, it has consolidated the Regional Strategic Analysis and Knowledge Support Systems (ReSAKSS) and established an African Growth and Development Policy (AGRODEP) Modeling Consortium.

OUTCOMES

- ▶ African agricultural policymakers and stakeholders have access to data, tools, and analyses compiled by ReSAKSS and disseminated through its website and its Annual Trends and Outlook Reports (ATORs) and other publications. This information informs and guides agricultural policy planning and implementation. For instance, the Africawide 2012 ATOR highlighted trends in public agricultural expenditure and fed into the review and dialogue processes of the 9th CAADP Partnership Platform meeting held in Ethiopia in March 2013, where it was officially endorsed.
- ▶ ReSAKSS and its partners have initiated efforts to strengthen the countries' capacities for establishing and undertaking effective and regular agriculture joint sector reviews (JSRs)—key instruments for supporting accountability in accordance with the CAADP Mutual Accountability Framework. ReSAKSS drafted a concept note outlining the content of a JSR, developed terms of reference for conducting one, and has held several JSR technical training workshops for the initial group of five target countries.
- ▶ ReSAKSS has provided technical support for the establishment of country-level Strategic Analysis and Knowledge Support Systems (SAKSS). Country SAKSS provide high-quality analyses and knowledge products to improve policymaking, track progress, and facilitate policy dialogue, benchmarking, review, and mutual learning processes that are part of the CAADP implementation agenda.
 - ✦ As a first step to either establishing more SAKSS platforms or strengthening existing ones, in mid-2012 ReSAKSS launched capacity needs

assessments in 15 countries: Benin, Burkina Faso, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Niger, Nigeria, Rwanda, Senegal, Tanzania, Togo, and Uganda. The assessments have been completed in Benin, Ethiopia, Ghana, Malawi, Mozambique, Rwanda, Senegal, Tanzania, Togo, and Uganda. Assessment outcomes are used to develop country capacity-strengthening strategies and to help direct the work of the country SAKSS. SAKSS platforms have already been launched in Ghana, Mozambique, and Rwanda and will soon be operational in Togo. Steps are being taken to launch and operationalize the platforms in the remaining countries.

- ReSAKSS has helped to build institutional and technical capacity through training, collaboration with local partners, and sharing best practices. In 2013, ReSAKSS organized training workshops for about 285 participants from all regions of Africa, 30 percent of whom were female. The training covered agricultural policy analysis, geographic information systems (GIS), and monitoring and evaluation techniques. Participants came from ministries of agriculture, national statistical offices, universities, civil society groups, and private-sector organizations.

The African Growth and Development Policy Modeling Consortium

MOTIVATION

The African Growth and Development Policy (AGRODEP) Modeling Consortium aims to position African experts as leaders in the study of strategic development issues in Africa as well as in the broader agricultural growth and policy debate. With 147 members from 29 African countries, AGRODEP facilitates the use of economic modeling tools, promotes access to data sources, provides training and research grants, and supports collaboration between African and international



researchers. The consortium maintains repositories of economic models, datasets, and research outputs and makes these resources available to all network members.

Launched in 2011, and supported by the Bill & Melinda Gates Foundation, AGRODEP is a collaboration among IFPRI, the Association for Strengthening Agricultural Research in Eastern and Central Africa, the West and Central African Council for Agricultural Research and Development (CORAF/WECARD), and the Food, Agriculture and Natural Resources Policy Analysis Network.

OUTCOMES

- Ninety-eight AGRODEP members were provided with training through fifteen training courses in 2012 and 2013 that covered such topics as data, economic modeling, poverty analysis, impact evaluation, and panel data econometrics.
- Sixteen research projects are being undertaken by AGRODEP members under the seed-fund program and innovative research grants program, which both include CAADP research topics. Twelve AGRODEP members presented their research at international conferences as a result of travel grants from AGRODEP. Eight AGRODEP members received sponsorship from the World Trade Organization and presented their research at the 15th Annual Conference on

Global Economic Analysis held in Geneva, Switzerland in 2012.

- ▶ The AGRODEP website continues to serve as a repository for the economic models that are being developed for members, as well as for the data portal and for related resources that AGRODEP is bringing together from various sources. Additionally, AGRODEP publishes monthly newsletters and a quarterly AGRODEP Bulletin, as well as peer-reviewed working papers and technical notes that are used to document models, research, and capacity-building activities.

The Agricultural Science and Technology Indicators Initiative

MOTIVATION

Increasingly, policymakers are recognizing that greater investment in agricultural research and development (R&D) is vital for increasing agricultural productivity. Data on the size and scope of R&D capacity and investments allow performance, inputs, and outcomes to be measured, monitored, and benchmarked.

IFPRI's Agricultural Science and Technology Indicators (ASTI) initiative, with support from the Bill & Melinda Gates Foundation, provides comprehensive quantitative and qualitative information on and analyses of trends in agricultural R&D investment, human capacity, and institutions in low- and middle-income countries. ASTI allows countries to track their progress over time and compare it to other countries. The initiative also raises awareness of ongoing challenges and informs decisions on funding, capacities, and the organizational structures of research institutions.



OUTCOMES

- ▶ During 2011–2012, ASTI released a series of country notes and regional assessments based on human-resource capacity and investment data through the year 2008 from public agricultural R&D agencies in Africa south of the Sahara and South Asia. Datasets for Africa south of the Sahara have recently been updated to now cover 2011, and the ASTI team is currently finalizing a new series of country factsheets as well as a regional report. A similar set of outputs will be released for South Asia later in 2014.
- ▶ In 2012, ASTI produced a new global assessment describing worldwide trends in agricultural R&D spending. The report revealed that following a decade of slowing investment in the 1990s, global public spending on agricultural R&D increased steadily during 2000–2008. This growth was driven largely by positive trends in China, India, and a number of other larger, more advanced middle-income countries. Africa south of the Sahara managed to expand its agricultural R&D capacity and investment considerably after the turn of the millennium. Much of this recent progress, however, was driven by a few countries and masks significant challenges and constraints faced by many others.
- ▶ ASTI's outputs are frequently referenced in high-level meetings and reports:
 - ✦ The 2012 G8 Accountability Report and the Group of 20 (G20) Interagency Report have been very important in raising stakeholder awareness of the value of ASTI data and have called for sustainable support for ASTI.
 - ✦ The US under secretary of agriculture circulated ASTI's global assessment to all participants in the G20 Meeting of Agricultural Chief Scientists in September 2012.
 - ✦ ASTI data also featured prominently in the background report that was prepared for the Science Agenda for Agriculture in Africa (S3A), which



is currently being finalized and which will be discussed at the African Heads of State meeting later in 2014. ASTI's new data and outputs for the region will undoubtedly play an important role in informing the debates surrounding S3A.

- ✦ Other recent influential reports and initiatives in which ASTI data featured prominently include the Food and Agriculture Organization of the United Nations' *The State of Food and Agriculture 2012*, the Economist Intelligence Unit's newly developed Global Food Security Index, the Organisation of Economic Co-operation and Development's *Improving Agricultural Knowledge and Innovation Systems* book, and the *Agricultural Technology for Development* report by the United Nations secretary-general.
- ▶ ASTI data and analyses have been instrumental in helping policymakers understand levels of agricultural R&D investment and human capacity and where to increase them, if necessary. ASTI has improved the relevance of its outputs for policymakers, R&D managers, and other stakeholders and has significantly increased its communication and outreach efforts since 2011. During the launch of the most recent data collection round in Africa south of the Sahara, it became clear that many African partners and other in-country stakeholders had used ASTI materials to influence the public debate on policy decisions in their respective countries. ASTI's financial data have also been extensively used as an advocacy tool when seeking more R&D funding from the government or donor organizations. According to a December 2010 impact assessment of the project, "ASTI has been a productive program, creating a unique international public good. It produces agricultural research investment data and publications widely used by national, regional, and international audiences to assess the levels and trends in research funding and capacity. The data are used in some cases to influence agricultural research budgets."
- ▶ Gates Foundation funding enabled ASTI to build a strong programmatic base that has contributed to the program's recent successes in securing funding from additional donors to expand ASTI's activities to other regions.

Ethiopia's Agricultural Transformation Agency

MOTIVATION

Launched in 2011 with support from the Bill & Melinda Gates Foundation, IFPRI leads a project that provides policy research, capacity building, and policy communications support to the Ethiopian Agricultural Transformation Agency (ATA).

The ATA, established in December 2010, was the result of two years of extensive analysis led by IFPRI researchers on eight areas within Ethiopia's agricultural sector: seeds, input markets, irrigation, cooperatives, soil health, technology access and adoption, extensions and research, and output-market value chains. This relatively new government agency is supporting the Government of Ethiopia's national agenda to achieve growth in the agriculture sector and food security.

Central to the formation of ATA as a coordination agency—which will work with the Ministry of Agriculture (MoA), regional Bureaus of Agriculture, the Ethiopian Institute of Agricultural Research, and private and civil society partners—was the realization that past agricultural development initiatives in Ethiopia focused on narrow issues, which led to disconnected interventions across the agriculture sector. As a result, many projects did not achieve widespread success in improving national agricultural productivity and production. To remedy these issues, the ATA works across three main areas:

- ▶ Increasing the yields of key commodities, such as cereals (maize, teff, wheat, and barley), pulses, oilseeds (particularly sesame), coffee, and livestock
- ▶ Addressing more systemic issues, such as cooperative management, seed quality, and soil health

IFPRI provides research support to the ATA in its efforts to introduce innovative approaches to increasing agricultural productivity and improving market efficiency. The research tasks are designed to meet the ATA's demands,

and to be responsive to a need for both longer-term strategic research and shorter-term information needs.

ONGOING WORK AND OUTCOMES

- ▶ IFPRI provides policy guidance to the ATA on specific issues related to the eight areas within the agricultural sector or other aspects of agriculture that might become important. These issues include the following:
 - ✦ Fertilizer imports (Ethiopia's MoA agreed to adopt IFPRI's proposed projection model and reduce 2012 fertilizer imports. The cancellation of the import of 250,000 tons saved the country roughly \$200 million.)
 - ✦ Financial audits of Ethiopia's agricultural cooperatives
 - ✦ Minimum price support for Ethiopian wheat, economical storage options, and grain export bans
- ▶ IFPRI provides monitoring and evaluation of the ATA's interventions, such as those involving teff, wheat technology, and direct seed marketing.
- ▶ IFPRI works with the ATA on cross-cutting agricultural issues such as the following:
 - ✦ Research on agricultural production and marketing that can help inform the design of future ATA interventions
 - ✦ Soil diagnostics to develop an up-to-date soil map to help farmers achieve healthier soil, higher productivity, and sustainable land management practices

IFPRI offers trainings and resources to the ATA on topics such as surveying and interviewing tools, forecasting fertilizer demand, and statistical programs.



Improving Food Security in South Asia

Cereal Systems Initiative for South Asia

MOTIVATION

IFPRI leads the policy research component of the Cereal Systems Initiative for South Asia (CSISA), a regional effort designed to raise agricultural productivity and enhance farmers' incomes by improving germplasm and crop management practices for rice, wheat, maize, and livestock systems in Bangladesh, India, and Nepal.

For CSISA to have an impact on productivity and livelihoods, improvements in the policy and institutional landscape of South Asia's cereal systems must also occur. Supported by the Bill & Melinda Gates Foundation, IFPRI's contribution to CSISA addresses the policies needed to promote the adoption of new technologies and enhance their productivity and income benefits for smallholders in the region.

OUTCOMES

- ▶ Research findings suggest that the accelerated adoption of resource-conserving crop management practices and hardier cultivars is dependent on strategic policies and investments that encourage public-private partnerships, innovative business models, and market segmentation strategies that target small-scale, resource-poor farmers.
- ▶ Results from this initiative provide evidence of the complex relationships among intellectual property rights, private investment in crop genetic improvement, seed industry structure, and agricultural

productivity growth. Recommendations suggest means of operating along pathways to accelerate rice and wheat productivity through both public- and private-sector investment in research and development.

- ▶ Research during CSISA's new phase (2013-2015) focuses on the ways in which changing labor, gender, asset, and migration dynamics affect pro-poor technology development and delivery in South Asia.

Understanding Gender Issues in Agriculture

Gender, Agriculture, and Assets

MOTIVATION

Access to, as well as ownership and control of, assets—including physical, human, and social capital—are critical determinants of well-being. However, these assets are unequally distributed between men and women. Closing the gap between men's and women's ownership and control of assets is not only important for women's empowerment and welfare but is also a necessary step toward achieving global development goals. Realizing the importance of incorporating gender into its own development programming, the Bill & Melinda Gates Foundation is supporting the evaluation of agricultural development programs' impact on gender asset inequality and other development outcomes.

OUTCOMES

- ▶ IFPRI worked with the International Center for Research on Women to develop guidelines for incorporating gender considerations into agricultural development projects for the Bill & Melinda Gates Foundation. The guidelines were featured on the Foundation's website, in the area of addressing women's needs in agricultural work.



- ▶ Oxfam America developed a winning proposal that incorporated key inputs from IFPRI's Gender, Agriculture, and Assets program and the CGIAR Systemwide Program on Collective Action and Property Rights. The Bill & Melinda Gates Foundation awarded US\$1.3 million to Oxfam America's two-year project, completed in 2013, to empower and improve livelihoods for up to 500,000 women in smallholder farm households in Ethiopia, Mali, and Tanzania.
- ▶ IFPRI and the International Livestock Research Institute's Gender, Agriculture, & Assets Project (GAAP), funded by the Bill & Melinda Gates Foundation, is currently providing inputs for nine projects, supported by the Foundation and other donors, in Bangladesh, Burkina Faso, India, Kenya, Mozambique, Tanzania, and Uganda. GAAP aims to improve project implementation by focusing attention on gender differences in asset ownership and control.

Strengthening Policy Communications

Millions Fed: Proven Successes in Agricultural Development

MOTIVATION

Learning from agricultural development successes is more critical now than ever before. The Millions Fed: Proven Successes in Agricultural Development project, supported by the Bill & Melinda Gates Foundation, identified 20 proven successes from around the world and documented evidence on where, why, and how these interventions succeeded. The project aims to understand which types of policies, programs, and investments in agricultural development have effectively reduced hunger and poverty.

OUTCOMES

- ▶ The book, *Millions Fed: Proven Successes in Agricultural Development* was released during an opportune time, when policy-makers were ready and willing to scale up their investments in agricultural development through



national, regional, and global mechanisms. Representatives from organizations such as the Canadian International Development Agency (now known as the Department of Foreign Affairs, Trade and Development), the Common Market for Eastern and Southern Africa, the Forum for Agricultural Research in Africa, the Brazilian Ministry of Social Development and Fight against Hunger, and the United Nations noted their plans to use the lessons gleaned from Millions Fed. Their comments included the following statements:

- + “This work is particularly timely as we engage to put into action the L’Aquila commitments.”
- + “[Millions Fed] will contribute to the adoption by governments of sound policies.”

- The project materials have been used widely in training and capacity building activities. More than a dozen academic programs reported using Millions Fed materials in their classrooms, including Harvard University, the Massachusetts Institute of Technology, the Johns Hopkins University, and Cornell University. The US Peace Corps distributed the *Millions Fed* book to volunteers in 75 offices around the world for use in the agricultural development, food security, and environmental fields.
- The Millions Fed project yielded an increased appreciation for the communication of technical research to general audiences. The book was featured in more than 200 media outlets. For these efforts, Millions Fed received three prestigious Mercury Awards and the Quality of Communication award of the Agricultural & Applied Economics Association.

2020 Vision Conference: Leveraging Agriculture for Improving Nutrition and Health

MOTIVATION

Agriculture, nutrition, and health (ANH) are inseparably linked—agriculture provides food to nourish people so they can lead healthy lives, and productive agriculture requires the labor of healthy, well-nourished people. But can agriculture do more to improve human health and nutrition?

In February 2011, IFPRI’s 2020 Vision Initiative brought together the ANH sectors at an international conference on “Leveraging Agriculture for Improving Nutrition and Health,” in New Delhi. Conference participants examined what changes are necessary to maximize agriculture’s contributions to human health and nutrition and

how human health and nutrition could contribute to an agricultural system that is both productive and sustainable. The Bill & Melinda Gates Foundation, together with a consortium of other sponsors, supported this international conference, which was attended by more than 1,000 participants from 65 countries.

OUTCOMES

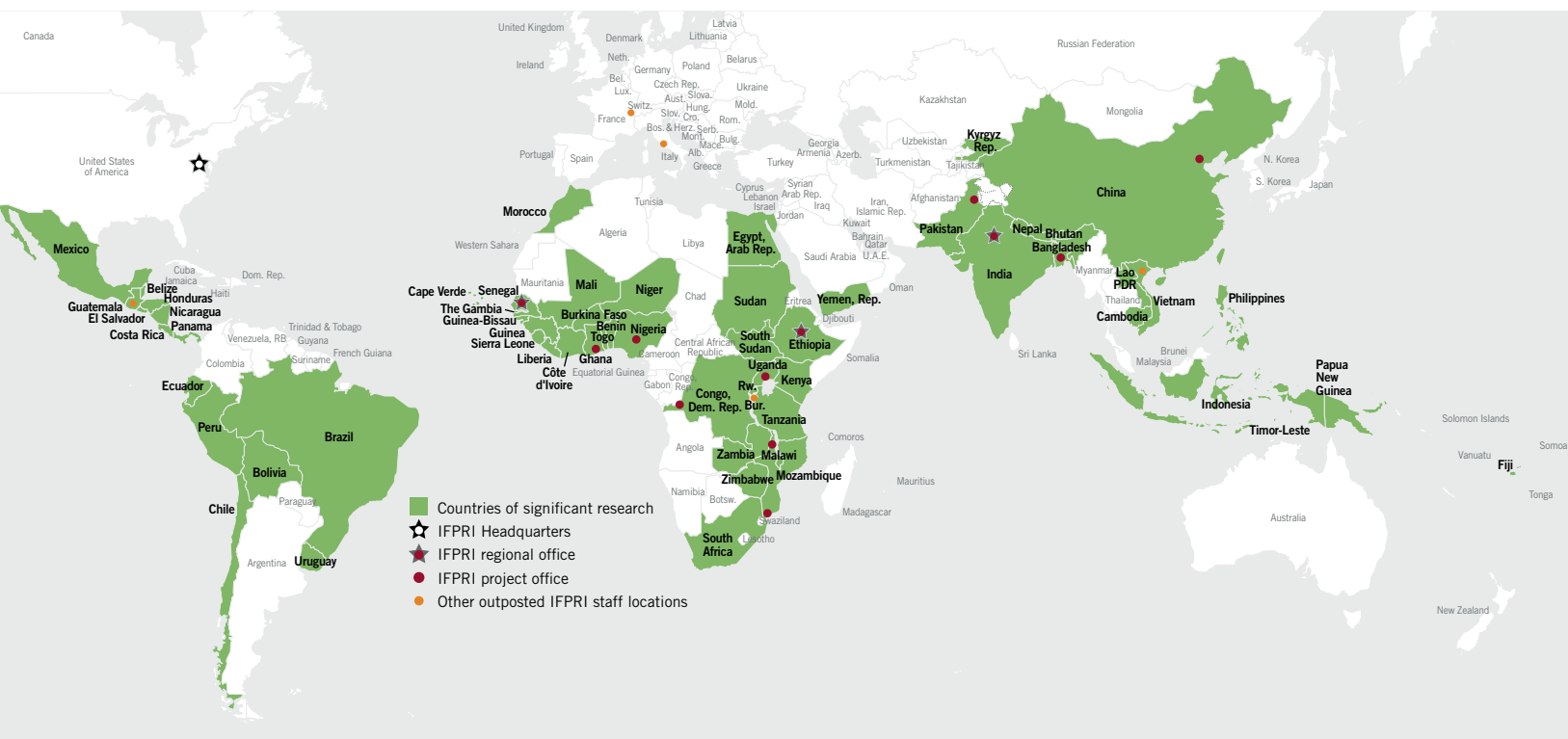
The conference informed, influenced, and mobilized action by key players to make agricultural investments to sustainably improve the health and nutrition of the world’s most vulnerable people. According to an independent external assessment, the conference had important impacts on the Bill & Melinda Gates Foundation:

- “...following the Conference in 2011, the Gates Foundation asked its Agricultural Development and Nutrition teams to conduct a review of published and project documents about the linkages between agriculture and nutrition. This review reinforced views within the Foundation that its agricultural development and nutrition programs could be part of a virtuous circle, and it went on to identify several specific focus areas along the value chain for making complementary investments to exploit such complementary benefits. These included biofortification (which the Foundation had been funding since 2004), work with smallholder farmers on animal, dairy, and horticultural projects, looking for ways to reduce mycotoxins in food crops, and also policy and advocacy. When publicizing this new set of approaches in August 2012, the Gates Foundation explicitly mentioned the 2020 Conference as an example of its own work in policy and advocacy.”

Looking Forward

Hunger and malnutrition are persistent challenges that demand multifaceted solutions. By serving as a trusted voice on food policy issues, IFPRI has helped to transform

IFPRI OFFICES AND COUNTRIES OF SIGNIFICANT RESEARCH



action on food and nutrition security, from country-level policy decisions to locally developed implementation processes. IFPRI's work with the Bill & Melinda Gates Foundation continues to grow through innovative programs such as HarvestPlus and through support for the Ethiopian ATA.

As the world faces a future of growing population, escalating pressures on scarce natural resources, and a rapidly changing climate, IFPRI's rigorous and pragmatic

approach to food policy research will become more valuable than ever in supporting donor investments, country-led policy development, and the design and implementation of on-the-ground programs. IFPRI looks forward to a sustained, fruitful partnership with the Bill & Melinda Gates Foundation as it continues to find sustainable solutions to hunger, poverty, malnutrition, and to the challenges faced by farming families in developing countries.

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

A world free of hunger and malnutrition

IFPRI Washington DC

2033 K Street, NW
Washington, DC 20006-1002 USA
Phone: +1-202-862-5600
Fax: +1-202-467-4439
Email: ifpri@cgiar.org
Web: www.ifpri.org

IFPRI Dakar

Titre 3396, Lot #2
BP 24063
Dakar - Almadies, Senegal
Phone: +221-33-869-9800
Email: ifpri-dakar@cgiar.org

IFPRI Addis Ababa

P.O. Box 5689
Addis Ababa, Ethiopia
Phone: +251-11-617-2500
Fax: +251-11-646-2927
Email: ifpri-addisababa@cgiar.org

IFPRI New Delhi

NASC, DPS Road
Opp Todapur, Pusa, New Delhi 110012
India
Phone: +91-11-2584-6566/67/68
Fax: +91-11-2584-8008/2584-6572
Email: ifpri-newdelhi@cgiar.org

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