



# AGRICULTURE AND HEALTH

## Addressing the Vital Links

ood health and productive agriculture—both essential in the fight against poverty—are interlinked, as good health requires productive agriculture and productive agriculture requires healthy people. Consideration of these linkages throughout the policymaking process can improve the health of the poor, reduce malnutrition and food insecurity, and promote pro-poor agricultural development by increasing synergies and collaboration between agriculture and health in research, policy, and practice.

Agriculture faces an array of new challenges, such as globalization and environmental change. New global health crises are emerging, while old ones persist. And, as the world becomes more integrated, so do the agricultural and health problems people face. Addressing these problems thus demands understanding and action at the intersection between agriculture and health. Isolated action limited to the boundaries of each sector can no longer solve problems in an integrated world. The time is ripe for the agricultural and health sectors to work more closely together to develop innovative solutions and contribute to the overarching goal of addressing poverty.

## HOW ARE AGRICULTURE AND HEALTH LINKED?

Agriculture and health are linked in several important ways and are both fundamental to the livelihoods of the majority of the world's poor. First, agriculture produces outputs that contribute to good health, such as the staple foods that sustain most of the developing world, but some agricultural outputs may also lead to ill health when contaminated with food-borne diseases. Second, agriculture interacts with the environment in a variety of ways that affect human health. A notable example of this is irrigation, which by altering the environment can create conditions favorable for the growth of parasitic vectors, including malaria, schistosomiasis, and river blindness. Third, agriculture affects the income earned and labor supplied by people who work in the sector—both of which provide opportunities and risks for good health. The health status of producers and workers also affects agriculture. Those in poor health are less able to work, affecting both productivity and income and perpetuating a downward spiral into ill health and poverty. In a vicious

cycle, this further jeopardizes food security and economic development for the wider population.

## CGIAR RESEARCH ON AGRICULTURE AND HEALTH

The Consultative Group on International Agricultural Research (CGIAR) has long investigated different facets of the connection between agriculture and health. Current and emerging research in the CGIAR focuses on some of the most critical health issues linked with agriculture: nutrition, malaria and other water-related diseases, HIV/AIDS, occupational health effects of pesticide use, food safety, livestock-related health and zoonotic diseases, aflatoxins, and medicinal plant production. Some centers are also working on the links between specific agricultural systems—such as agroforestry, agrobiodiverse farming, forestry, and fish production—and nutrition and health. The objective of this research is to maximize the health benefits of agricultural research and policy and reduce any negative health impacts generated by the agricultural supply chain.

In 2005, IFPRI hosted a workshop on the linkages between agriculture and health, bringing together experts in the field. Participants pointed to a need for improved coordination of health-related work in the CGIAR in order to unite researchers working on agriculture-health linkages, make efficient use of research resources, and create a focal point for collaboration with the health sector.



## AGRICULTURE AND HEALTH RESEARCH PLATFORM (AHRP)

In an effort to move toward these goals, members of the CGIAR Alliance Executive endorsed a Platform on Agriculture and Health Research in April 2006. The Platform will promote and coordinate scientific and policy research on linkages; develop partnerships with the health sector to draw on mutual strengths; build on common ground between researchers, policymakers, and practitioners; communicate through publications and outreach; and develop and adapt methodological tools to link agriculture and health in research, policy, and practice. The ultimate goal is to improve health and livelihoods through both research and policy.

The Platform's early work has primarily involved network building, commissioning new intersectoral research, and enhancing communications in this field. A collection of 16 briefs on different aspects of the linkages between agriculture and health, *Understanding the Links between Agriculture and Health*, was published in 2006. This was followed in 2007 by a special issue on agriculture and health of the *Food and Nutrition Bulletin*, including papers by both agriculture and health experts on a wide range of topics. A resource Guide to CGIAR research on agriculture and health linkages is also available on IFPRI's website (http://www.ifpri.org/ahrp/ahrpresguide.asp).

The Platform also established long-term collaboration with the health sector, notably the World Health Organization (WHO) following a June 2007 workshop in Geneva. The CGIAR and the WHO agreed to work together to formulate research priorities and use research findings for policy development and governance.

#### **RESEARCH AND POLICY PRIORITIES**

The Platform has identified five research priorities that would benefit from greater CGIAR collaboration with the health sector and would help achieve CGIAR and health-sector goals. Research will focus on mitigating any negative health effects of agricultural activities while maximizing the opportunities for agriculture to benefit health and better health to benefit agriculture:

#### I. HIV/AIDS and Agriculture

The majority of people affected by HIV and AIDS globally depend on agriculture for their livelihoods and have suffered great losses in productivity and wealth in the presence of the disease. Multiple interactions exist between HIV/AIDS and agriculture that have had repercussions on disease transmission, poverty, and the well-being of affected populations.

### 2. Zoonotic Disease (e.g., avian influenza) and livelihoods

Zoonotic diseases represent a major risk to human health and economic security (80% of new diseases come from animals). Highly pathogenic avian influenza has mobilized worldwide attention to containing and preventing a pandemic. Studies are now underway to assess the livelihood and welfare consequences of the disease and control measures.

#### 3. Nutrition, Diet, and Health

Nutrition appears at a critical interface between agriculture and health. In creating these sector linkages,

food security may be ensured and dietary quality improved to prevent micronutrient deficiencies. A greater understanding of the pathways through which agriculture-oriented programming (e.g., homestead food production) leads to improved nutrition is needed.

#### 4. Food Safety and Growing Food Supply Chains

The increasing complexity of agricultural production and food supply chains has introduced new risks of food contamination; millions of adults and children suffer from the ill-health effects of food-borne diseases. For example, there is growing evidence of the public health problems related to mycotoxin contamination.

## 5. Water Associated Disease and Water Management

Water is essential in nearly all interactions of an ecosystem. Agricultural water management can increase yield, but similarly increase risks for water-borne disease. The water-related effects arising from climate change have implications for both human health and agriculture. Rift Valley fever, a zoonosis generally occurring after heavy rains or flooding, requires multisectoral approaches to control.

#### ARCHITECTURE OF THE PLATFORM

The following architecture has been created for the Platform:

Core Research Group. A research-oriented group primarily charged with stimulating and forming small task forces to prepare joint agriculture and health research proposals on identified priority areas with guidance from the Management Team.

Management Team. A small hands-on management team to manage the global platform activities, including the preparation of a master proposal, to draft guidelines/criteria for joint agriculture-health research proposals, fundraising, coordination, planning for major meetings, liaising with the Core Research Group and with the Advisory Panel, and to generally support ongoing activities.

Advisory Panel. Panel members provide periodic technical and strategic advice to the Platform. They will be involved in peer-reviewing individual project and global platform proposals, identifying funding opportunities, and generally advocating for the Platform. Initially drawn primarily from health organizations, the panel are now become more broad-based. And new members from agricultural research and development organizations will be recruited, assuring an appropriate thematic and geographical balance.

The Agriculture and Health Research Platform (AHRP) is an initiative of the CGIAR, led by IFPRI, in partnership with health research and development organizations. For further information: Stuart Gillespie, Senior Research Fellow, FCND, IFPRI (s.gillespie@cgiar.org).

