

## COMMENTARY

### Bring Agriculture, Nutrition, and Health Together

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Three quarters of the world's poor live in rural areas of the developing world, and the large majority of them rely on agriculture for their livelihood and food security. There are important elements that could foster true inter-sectoral collaboration between agriculture, nutrition, and health in alleviating poverty. However, the framework for linking agriculture and health is missing, and so is the set of instruments to effectively exploit the synergies between agriculture and health and to achieve joint policy formulation.

Agriculture supports health by providing safe and nutritious food, as well as fiber, medicinal plants, and materials for shelter for the world's population. Among rural communities, agriculture contributes to livelihoods and food security, and provides assets and income which can be spent on healthcare and disease prevention. In turn, successful health policies benefit agriculture by protecting the labor force from workdays and income lost to illness, chronic disabilities or mortality. In spite of these obvious linkages, the agriculture and health sectors have typically failed to work together in developing joint policy.

Setting priorities for agriculture and health research requires a unified framework. Two complementary options may be best pursued in parallel. First, a focus should be put on lives saved and livelihoods improved (measured by mortality, morbidity, and disability adjusted life years). Second, priority should be given to enhanced economic productivity, growth, and returns to investment (measured by human productivity, lifetime earnings, and expected benefit–cost ratios). In view of the different positions of health and agriculture in the society and economy, a dual but linked framework approach with both of these very different concepts may be helpful for an informed policy discourse for priority setting.

Adopting agriculture as the starting point may lead to increasing the health benefits of agricultural production,– while minimizing the potential harm caused by agriculture, for example, through water-borne diseases, zoonoses, mycotoxins, highly hazardous pesticides, landscape destruction, and climate change. Biofortification—plant breeding for micronutrient-rich foods— and the dissemination of these foods, is a good example for the integration of agriculture, nutrition, and health. Biofortification is successfully reaching malnourished populations in relatively remote rural areas and delivers biofortified foods to people with limited access to commercial fortified foods and supplements.

In today's more risk-prone world, however, a **comprehensive approach** is needed to achieve food and nutrition security and related health benefits. Sustainable and strategic solutions that encompass the entire world food system are needed to mitigate the emerging challenges and build resiliency towards future risks. Sound policy actions in three priority areas are called for:

1. Expand social protection and child nutrition action to protect the basic nutrition of the most vulnerable. Protective actions are needed to mitigate short-term risks. These include conditional cash transfers, pension systems, and employment programs. Preventive health and nutrition interventions are also needed to avoid long-term negative consequences. Since good nutrition is crucial for children's physical and cognitive development, as well as their productivity and earnings as adults,<sup>1</sup> early childhood nutrition actions and school feeding programs should be strengthened and expanded to ensure universal coverage.
2. Reduce extreme volatility in agricultural markets that undermine food and nutrition security. Two global collective actions are needed to reduce extreme volatility in agricultural markets and ensure food security. First, a small, independent physical reserve should be established exclusively for emergency response and humanitarian assistance. Second, a virtual reserve and intervention mechanism should be created to help avoid price spikes in the future.<sup>2</sup> Facilitation of rule-based, transparent, fair, and open international trade is also needed to overcome the crises.
3. Promote pro-poor agricultural growth with technology and institutional innovations that creates the jobs among the poor and assures the supply of food. To enhance agricultural productivity, investments should be scaled up in the areas of agricultural science and technology, rural infrastructure, rural institutions, and information monitoring and sharing. If public agricultural research is doubled and targeted at the poor regions of the world—Sub-Saharan Africa and South Asia—overall agricultural output growth would increase by 1.1 percentage points a year and lift about 282 million people out of poverty by 2020 through income and consumption effects.<sup>3</sup>

Innovations in institutions (laws and regulations, as well as organizations) have crucial roles to play in boosting food and nutrition security. Strong domestic and international leadership and collective action at a global scale are imperative for effective implementation of all of these actions. Innovation in the governance system around agriculture, food, and nutrition needs to deliver the global public goods for a food secure world.

<sup>1</sup> Hoddinott, J., J. A. Maluccio, J. R. Behrman, R. Flores, R. Martorell. 2008. Effect of a nutrition intervention during early childhood on economic productivity in Guatemalan adults. *The Lancet* 371 (610): 411-416.

<sup>2</sup> von Braun, J. and M. Torero. 2009. *Implementing physical and virtual food reserves to protect the poor and prevent market failure*. Policy Brief 10. Washington, D.C.: International Food Policy Research Institute.

<sup>3</sup> von Braun, J., S. Fan, R. Meinzen-Dick, M. W. Rosegrant, and A. Nin Pratt. 2008. *International agricultural research for food security, poverty reduction, and the environment - What to expect from scaling up CGIAR investments and "best bet" programs*. Washington, DC: International Food Policy Research Institute.

Strategic utilization and strengthening of the linkages between agriculture and health policy actions offers particularly strong opportunities for achieving poverty reduction and health goals in many low-income countries. This requires a new initiative for evidence-based and research-intensive action across the agriculture and health sector that is allied with effective communication, capacity strengthening, and social mobilization.