

Food safety and zoonoses program



In poor countries, diseases associated with agriculture have important human health impacts. Food that nourishes can also sicken and kill. This program focuses on assessing and managing the health risks associated with food safety, zoonotic diseases (transmissible between people and animals) emerging diseases, and diseases associated with agricultural intensification.

A major focus of our research is approaches to food safety and disease control that can work in informal markets and marginal areas. This program combines risk analysis, epidemiology, socio-economics and gender analysis to identify, test and adapt appropriate options for food safety assurance and control of zoonotic diseases within the context of developing countries.

Program activities are directly aligned with one of the four components of the CGIAR Research Program on Agriculture for Nutrition and Health, namely, prevention and control of agriculture-associated diseases. It also contributes to the value chain work of the CGIAR Research Program on Livestock and Fish.

Improving food safety

Food-borne diseases have enormous impacts on the health and livelihoods of people around the globe and are of great concern to consumers, producers, and policymakers. The most risky food chains are animal source foods and fresh vegetables contaminated with human or animal waste, and these are a major focus of the program. Another focus is the impact of fungal toxins on livestock and on the people who eat livestock products. Mycotoxins are produced by fungi which infest staple crops in tropical countries and which have human health, trade and livestock sector impacts.

Zoonotic and emerging diseases

The entire world bears the burden of diseases that originate in animals (such as HIV/AIDS and swine flu). However, the risks and benefits from emerging disease control are much greater for poor people. Research in this program

focuses on estimating and reducing the impacts of zoonotic diseases on poor people. Specifically, research in this area relies on multisectoral initiatives grounded in epidemiological studies, and an in-depth understanding of the variables that influence disease emergence and transmission. Effective interventions are assessed based on their relevance to the poor and their grounding in the knowledge of disease transmission pathways. Participatory methods—a powerful tool for engaging stakeholders and fostering positive change—are frequently used.

Other health risks in agro-ecosystems

The intensification of agriculture in different ecosystems poses a number of new and emerging risks to human health. For example, irrigation and dam construction expose millions to malaria and other diseases. Other “Ecohealth” issues that fall at the intersection of human, animal, and environmental health include an increase in the number of new diseases; an increase in the number of diseases due to wildlife pathogens that are amplified through growing livestock populations; the emerging resistance of pathogens to chemicals used in agriculture; and the increased impact of climate on diseases associated with agriculture. These developments are creating a need for ecosystem-related health services. Given the important role of the intensification of agriculture in managing emerging health risks, we will explore these research areas with partners to better understand the value that CGIAR research can add in the medium term.

Contact

Delia Grace
Program Leader
Food Safety and Zoonoses Program
d.grace@cgiar.org
<http://aghealth.wordpress.com>

The International Livestock Research Institute (ILRI) works with partners worldwide to enhance the roles that livestock play in food security and poverty alleviation, principally in Africa and Asia. The outcomes of these research partnerships help people in developing countries keep their farm animals alive and productive, increase and sustain their livestock and farm productivity, find profitable markets for their animal products, and reduce the risk of livestock-related diseases.

ILRI's mission is to improve food and nutritional security and to reduce poverty in developing countries through research for efficient, safe and sustainable use of livestock—ensuring better lives through livestock. Working closely with its partners, ILRI's three strategic objectives are:

- develop, test, adapt and promote science-based practices that—being sustainable and scalable—achieve better lives through livestock.
- provide compelling scientific evidence in ways that persuade decision-makers—from farms to boardrooms and parliaments—that smarter policies and bigger livestock investments can deliver significant socioeconomic, health and environmental dividends to both poor nations and households.
- increase capacity among ILRI's key stakeholders and the institute itself so that they can make better use of livestock science and investments for better lives through livestock.

ILRI's skills and expertise include our three main pillars for animal production—animal health, feeds and genetics—as well as, and more specifically: biology, molecular biology, microbiology, epidemiology, biotechnology, diagnostics and vaccine development; ecology, agricultural systems and agricultural value chains; sociology, gender and poverty analysis, participatory research and impact assessment; market economics; and development communications and knowledge sharing.

ILRI is a not-for-profit institution with a staff of about 700 and, in 2013, an operating budget of about USD 74 million. A member of the CGIAR Consortium working for a food-secure future, ILRI has its headquarters in Nairobi, Kenya, a principal campus in Addis Ababa, Ethiopia, and offices in other countries in East, West and Southern Africa and in South, Southeast and East Asia.

ILRI leads the CGIAR Research Program on Livestock and Fish, leads a component of a CGIAR Research Program on Agriculture for Nutrition and Health on the prevention and control of agriculture-associated diseases, and contributes to seven other CGIAR research programs. Staff members work in integrated sciences and biosciences programs that develop and deliver science-based practices, provide scientific evidence for decision-making and develop capacities of livestock-sector stakeholders. With the African Union/New Partnership for Africa's Development Planning and Coordination Agency, ILRI also hosts and manages the Biosciences eastern and central Africa (BecA)-ILRI Hub.



ilri.org
better lives through livestock
ILRI is a member of the CGIAR Consortium

Box 30709, Nairobi 00100, Kenya
Phone: + 254 20 422 3000
Fax: +254 20 422 3001
Email: ILRI-Kenya@cgiar.org

Box 5689, Addis Ababa, Ethiopia
Phone: +251 11 617 2000
Fax: +251 11 617 2001
Email: ILRI-Ethiopia@cgiar.org