

The Contribution of CGIAR Livestock Research to the Sustainable Development Goals

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An Ethiopian boy feeds his family cow a bit of sugar cane (photo by ILRI / Apollo Habtamu).

Livestock are central to achieving many of the Sustainable Development Goals (SDGs) and directly relevant to most of them. The growing demand for livestock products in developing countries, driven by population growth, higher incomes and urbanization, represents a huge opportunity for hundreds of millions of poor smallholder livestock farmers, processors and marketers, many of whom are women, to meet that market demand and rise out of poverty. Livestock products (meat, milk, eggs) provide essential nutrients that contribute to food and nutritional security. Even small amounts of animal-sourced foods in the diets of children improve not only their physical development but also their cognitive and learning abilities. Improving the efficiency of livestock production in developing countries, especially the productivity per animal, can double livestock productivity while halving its adverse environmental impacts, including reducing emissions of greenhouse gases, in those countries.

Some key livestock facts

- Four of the five highest value agricultural products are livestock products (milk, pig meat, beef, chicken meat)
- 1.3 billion people (one in five of the world population) depend on livestock for their livelihoods
- Livestock account for 40% of agricultural GDP in developing countries and the share is growing.
- Demand for milk and meat will triple in Africa by 2050
- In many developing countries, up to 80% of the population is employed in agriculture
- While livestock emit greenhouse gases that cause global warming, opportunities to greatly reduce such emissions in developing countries through better feeds and other more efficient livestock production practices are huge and as yet largely unexploited

CGIAR livestock scientists are working actively to help the world meet the SDGs. We are intentionally tailoring our livestock-related knowledge products, technologies, institutional arrangements and policy support to provide new options for meeting specific SDGs by addressing developing world livestock problems and opportunities.

While our research is relevant to many of the SDGs, it impinges directly on the following nine.

Livestock and inclusive, sustainable economic growth



Livestock and equitable livelihoods



Livestock and food security and safe and healthy balanced diets including animal-sourced foods



Livestock and sustainable ecosystems



Support to the development of targets and indicators

CGIAR livestock scientists contribute to the [Sustainable Development Solutions Network](#), especially as part of the [Sustainable Agriculture and Food Systems Thematic Network](#). This network identified the role that livestock play within agricultural and food systems development and highlighted specific examples in its report on [Solutions for Sustainable Agriculture and Food Systems](#). It also proposed specific [indicators](#) that could be used to track the contributions of the livestock sector to achieving the SDGs.

Research solutions

CGIAR scientists are developing research solutions to some of the biggest and most intractable livestock problems of the tropics and sub-tropics. They are generating biological options to improve livestock feeds, breeds and health raised under harsh conditions and a changing climate. They are targeting women, youth and other disempowered groups to ensure economic as well as food and nutritional security. And they are employing smart 'whole systems' approaches to development challenges to safeguard and sustain the planet's natural resources and ecosystem services.

The following are some examples of ways CGIAR livestock research is helping achieve the SDGs.

Sustainable Development Goal	Examples of livestock research
Livestock and inclusive and sustainable economic growth	
Goal 1. End poverty in all its forms everywhere	• Connecting poor farmers to markets – e.g. developing new business models for 10 million poor dairy farmers in East Africa • Doubling the productivity of poor smallholders' livestock through better feeding, veterinary care and breeding.
Goal 8. Promote inclusive and sustainable economic growth, employment and decent work for all	• Developing national 'Livestock Master Plans' to support effective investment planning to optimize livestock's contribution to economic growth • Developing a new vaccine for East Coast fever, which costs African cattle producers \$300M per year in cattle deaths and lost production
Livestock and equitable livelihoods	
Goal 5. Achieve gender equality and empower all women and girls	• Applying gender-transformative approaches that give women in livestock raising, processing and trading greater access to, and control over, livestock resources • Developing labour-saving technologies for livestock feeding
Goal 10. Reduce inequality within and among countries	• Insuring never-before-insured pastoralists against catastrophic drought and loss of livestock in remote drylands of the Horn of Africa • Developing options to reduce barriers to safe and sustainable domestic and regional trade in livestock products
Livestock and food security and safe and healthy balanced diets, including animal-sourced foods	
Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	• Doubling the supply of animal-sourced foods through better feeding, breeding and health • Reducing antimicrobial resistance through judicious use of antimicrobial drugs in livestock
Goal 3. Ensure healthy lives and promote well-being for all at all ages	• Reducing the burden of zoonotic diseases through better animal health and promotion of 'one health' approaches that integrate veterinary, medical and environmental understanding • Improving food safety in informal markets (where most animal-sourced foods are traded in developing countries); 6.5 million consumers in Kenya and Assam, India, are already benefiting from safer milk
Livestock and sustainable ecosystems	
Goal 6. Ensure access to water and sanitation for all	• Making more efficient use of water resources by improving forage varieties and livestock feeding regimes
Goal 13. Take urgent action to combat climate change and its impacts	• Improving grazing practices on rangelands, which have potential to sequester 8.6 million tonnes of carbon per year • Measuring (for the first time) and significantly reducing greenhouse gas emissions from small-scale livestock systems in developing regions
Goal 15. Sustainably manage forests, combat desertification, halt and reverse land degradation, stem biodiversity losses	• Reducing and reversing land degradation through better rangeland management