

# Livestock lead to better health in developing nations, rising consumption poses challenge

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In the face of reports about the ills livestock generate for the climate, environment and health, a new study published in the December issue of the journal *Current Opinion in Environmental Sustainability* emphasizes that livestock production in developing and developed countries are very different animals.

While rising consumption of meat, milk and eggs is one of the factors in epidemics of [obesity](#) and [heart disease](#) in developed countries, consumption of meat and milk in developing countries is associated with good rather than bad health. In poor countries, where most people subsist on poor starchy diets, the study highlights the fact that modest amounts of these foods improve people's nutrition and health, lower [mortality rates](#), and enhance [child development](#).

Furthermore, the new analysis by researchers at the Nairobi-based International [Livestock](#) Research Institute (ILRI), the UN Food and Agriculture Organization (FAO), and the Center for Collaborative Conservation at Colorado State University, finds that the current environmental risks posed by livestock are driven mainly by the impacts of over-consumption of livestock foods in wealthy countries and rapidly growing demand in emerging economies, particularly in China, Southeast Asia, and Brazil.

"Livestock are a lifeline for hundreds of millions of people, for whom livestock represent one of few options available to improve their incomes and nutrition," said Carlos Seré, director general of ILRI.

Nowhere is the "meat divide" between rich and poor greater than in levels of consumption of livestock foods. The authors note, for example, that although annual consumption of milk in the developing world is expected by 2050 to rise from an average of 44 to 78 kilograms per person, this is still far less than the 202 kilos per person consumed today in wealthy countries.

"It would be unethical, even for the sake of the environment, to advocate policies that prevent the poor from increasing their consumption of milk and meat, when they consume significantly less than people in rich countries," said Mario Herrero, the paper's lead author and a senior scientist at ILRI, which is one of 15 research centers supported by the Consultative Group on International Agricultural Research (CGIAR). "However, without further investments in livestock that improve production and marketing efficiencies, rapid increases in milk and meat consumption in developing countries pose serious threats to the environment and will still fail to feed many of the world's poorest and hungriest people."

Milk, beef, eggs, chicken, and pork are key global commodities. Livestock production systems occupy 45 percent of the earth's land surface, excluding Antarctica, and are worth at least US\$1.4 trillion. Livestock production employs 1.3 billion people globally and is directly responsible for the livelihoods of 600 million poor livestock keepers. The market for dairy products produced by smallholders, for example, is significant in many developing economies, with India now the largest dairy producer in the world. And growing dairy enterprises mean more jobs for the poor: every 100 litres of milk handled daily in Kenya, for example, provides two full-time jobs, and at higher than the minimum wage.

According to the ILRI study, most livestock operations in sub-Saharan Africa and South Asia are far from industrial. Livestock are either raised

on small farms where they feed largely on leaves, stalks and other non-edible remains of food crops, or are herded over marginal lands unsuited for crop cultivation by pastoralists in search of grass.

Emissions from animal products account for about 18 percent of the global greenhouse gas (GHG) emissions. Expanding industrial livestock operations in China and other emerging Asian economies, and deforestation driven by large-scale cattle farming, are significant sources of livestock-related GHG emissions in developing countries.

"Livestock are not bad for the environment everywhere," said Herrero. "We need a thorough consideration of the trade-offs involved in livestock systems, so that we know where and how it makes sense to limit [livestock production](#) and consumption and where and how to increase production in sustainable ways."

The authors cite major opportunities for easing the tradeoffs, such as improved management of vast rangelands to remove significant quantities of carbon from the atmosphere in exchange for environmental service payments. There are also opportunities for exploiting synergies among different components of livestock-based agro-ecosystems, such as by breeding food crops to make better and wider use of their stover for livestock feed and providing incentives to pastoral livestock herders to continue to conserve the wildlife on their rangelands.

Changes in animal diets can dramatically reduce the amount of methane produced per animal. Shifting to more productive breeds would allow farmers to reduce the number of animals they keep while increasing their production levels.

"Governments and policymakers need to design policies that cap animal numbers, while at the same time providing incentives that encourage farmers to feed their animals better, so they can produce more food with

fewer emissions," said Seré.

There are also proven technologies that significantly reduce emissions from manure on industrial farms. According to the ILRI study, paying communities for their "environmental services" would encourage herders on vast rangelands of Africa and Latin America to adopt practices that would help protect biodiversity, as well as store carbon.

"Right now, farmers get paid only for the beef or milk that they produce. If these other options come on board, then people will adopt more sustainable practices to cash in on environmental services," said Seré.

Source: International Livestock Research Institute

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