

Livestock and the MDGs

Livestock development is helping developing countries to meet all eight of the United Nations Millennium Development Goals. But, inappropriately managed, livestock enterprises can also harm environments, spread infectious diseases and endanger public health through unsafe foods. We can ensure that we make full use of livestock development to reach these major development goals by advocating policies, strategies and technologies that serve to enhance benefits livestock can provide poor communities.

Livestock plays an important role in meeting the demands of the United Nations Millennium Development Goals (MDGs) – see also Box on page 15. The following provide some examples of the many ways in which live-

stock development can contribute to cope with these Goals

■ Livestock, poverty and hunger (MDG1)

MDG1 is to eradicate extreme poverty and hunger. Nearly 1 billion people living on less than two US dollars per day in South Asia and sub-Saharan Africa keep livestock (Table 1). Between 80 and 95 percent of poor Africans

keep livestock and between 40 and 66 percent of poor people in India and Bangladesh keep livestock (FAO). Meeting the MDGs will thus require lifting livestock keepers out of poverty, and livestock must play a role in making that happen.

Livestock is an important source of income for women and thus can promote gender equality (MDG 3).

Nancy Johnson

International Livestock
Research Institute – ILRI
Nairobi, Kenya
n.johnson@cgiar.org



Photo: J. Boethling

A major way that livestock enterprises contribute to meeting the MDGs is by generating household income (MDG1 says – “reduce by half the proportion of people whose income is less than one US dollar per day”).

According to nationally representative data from across the developing world, 68 percent of households earn income from livestock (Davis et al., 2007). And although livestock’s share of rural household income is now smaller than that of crops – 12 percent versus 30 percent – it is growing much faster than that of crops. While the share of income from cropping remained stable or even declined, the share of income from livestock grew by 75 percent in Ghana between 1992 and 1998, by 110 percent in Vietnam between 1992 and 1998 and by 290 percent in Panama between 1997 and 2003 (ibid).

Livestock’s share of income was highest in the poorest income quintile, suggesting that benefits of climbing out of poverty through a “livestock ladder” (from chickens, to goats, to cattle) can reach the poorest people, which is essential if MDG’s are to be met. Livestock’s share of income is also highest in arid and semi-arid areas, where the highest populations of poor people live and some 55 percent of income comes from livestock.

Improving small-scale livestock keeping can have a considerable impact on poverty alleviation, as, for example, 90 percent of poor Africans keep livestock.

Growth in demand for milk and meat, known as the “livestock revolution” and mainly driven by urban consumers in developing countries, is predicted to double demand between 1990 and 2020 – the period within which the United Nations declared we must meet the MDGs (Delgado et al., 1999). This rising demand for milk, meat, fish and eggs has generated jobs all along the livestock value chain, from input sales through animal production, trading and processing to retail sales. This copes with MDG1 saying: “achieve full and productive employment and decent work for all, including women and young people”.

Trading and processing jobs are especially high in the so-called informal sectors of countries in Asia and Africa, where most meat, milk, eggs and fish are sold (Grace et al., 2008) and where most of the people selling and buying livestock foods are themselves poor (Omoro et al., 2001; Kaitibie et al., 2008).

Street food is a large part of the informal sector in most developing countries – the largest in South Africa (Perry and Grace) – and therefore a major source of income and employment for the poor. Animal-source



Photo: ILRI

foods are among the most commonly sold street foods (Perry and Grace) and it is poor women who do most of the work preparing and selling these foods.

Although livestock are thus central to the livelihoods of world’s poor-

Table 1: Number of livestock keepers living below US\$2 per day

Region/sub-region	Number of poor livestock keepers ('000)
Sub-Saharan Africa	319,908
Central Africa	29,815
Western Africa	132,742
East Africa	104,816
Southern Africa	52,534
South Asia	606,967
India	546,012
Bangladesh	60,955
Total	926,875

Source: Thornton et al, 2003 (updated)

Iron deficiency

The United Nations estimates that up to 5 billion people (80 % of world population) suffer from iron deficiency, which can impair mental development and reduce physical activity, economic productivity and well being. Five per cent of maternal mortality is due to iron deficiency (Meenakshi et al., 2009). Animal source foods are important sources of iron and other important micronutrients.



Among the poor, livestock serve as “piggy banks” as they can always be sold to meet cash needs.

Livestock are more likely to reduce hunger by providing a regular source of household income, with which, even in rural areas, people are increasingly buying (rather than producing) most of their food. This is in line with MDG1: “reduce by half the proportion of people who suffer from hunger”. Increasing incomes through livestock thus reduces malnutrition by improving household access to food.

Across the developing world, people keep livestock to increase their crop production (animals provide manure for fertilising crop fields and traction for ploughing and transporting goods to markets), to store wealth (livestock are the major asset of most poor households) and to feed their families (livestock incomes allow people to buy foods in the “hunger season”, when their granaries are empty and the new crops are not yet ready for harvesting). In the absence of banks and insurance policies, livestock serve as “piggy banks”, a way for people to save and store money. Families can always sell some of their livestock to meet cash needs throughout the year and to cope with droughts and other emergencies. Without the “diversified portfolio” that livestock provide small farmers, there would be much greater hunger in the world, due to both seasonal changes in the availability of food and to climate, market and other crises.

est populations, most of these people are too poor to consume a lot of milk, meat, fish or eggs themselves. At the national level, livestock products account for a relatively small amount of total calorie intake in Africa and Asia

(Table 2), which means that their direct impact on hunger – measured as per capita energy intake – is likely to be relatively small, except in special cases such as pastoral areas where they are the main food source.

Table 2: Energy and protein sources, by sub-region

Region	% of energy from cereals, roots, tubers	% of energy from livestock	% of protein from livestock
West Africa	66	5	16
Central Africa	69	4	19
East Africa	63	11	26
Southern Africa	72	12	36
India	64	8	16
Bangladesh	54	2	6

Source: FAOSTAT, 1999-2003 (average); FAO State of Food Insecurity in the World (2000)

■ Livestock, nutrition and health (MDGs 4, 5, 6)

In developing countries, livestock foods provide nourishing supplements to the staple grains that make up most meals. This is especially important to the most vulnerable populations, which the MDGs are targeting. Ani-

mal-source foods are energy dense and their proteins and micronutrients are more bio-available than those of plants. This makes them especially important for poor people subsisting on low-quality cheap starchy diets, particularly children, women in their child-bearing years, and people who are immune-suppressed, who have high nutritional requirements and/or inability to consume large quantities of lower quality foods (Perry and Grace, 2009; Randolph et al., 2007).

But livestock's contribution to human health is by no means all positive; 60 percent of diseases are transmitted between people and animals and animal-source foods are the most common source of food poisoning. These problems are manageable, however, and have been decreasing over time (Perry and Grace, 2009).

■ Livestock and women (MDG3)

A major determinant of women's level of education, political access, and food and nutritional security is their access to, and control over, productive assets compared to men's (A. Quisumbing (ed.), 2003; L. Smith et al, 2003; World Bank, 2001). Closing the gender asset gap is a necessary step towards achieving the MDGs, and livestock have an important role to play in this. In many developing countries, legal, economic and cultural restrictions make it difficult for women to own or control land and other assets

Livestock livelihoods serve the eight MDGs

Raising and selling livestock and their milk, meat, eggs and other products helps to eradicate extreme poverty and hunger (MDG1) and to achieve universal primary education (MDG2) by generating household food, income and employment.

As an important source of income for women, and often their main asset, livestock can be crucial to progress in achieving gender equality (MDG3).

Because livestock foods are highly nutritious, supplementing the largely starchy diets of the poor with even small amounts of milk, meat, fish and eggs helps to reduce child mortality (MDG4), improve maternal health (MDG5) and combat HIV/AIDS and other diseases (MDG6).

When raised on mixed crop-and-livestock farms or herded appropriately, livestock are also often key to sustaining agro-ecosystem health (MDG7).

And livestock keepers and specialists are working with many others to develop a global partnership for development (MDG8).

or to participate in financial markets. Raising and selling livestock, especially chickens, goats, pigs and other small stock, as well as selling livestock fodder and manure, offers women one of the only ways they have to accumulate assets. A growing body of evidence documents how livestock enterprises are helping women to climb out of poverty.

■ Livestock and environment (MDG7)

Although livestock can degrade lands and pollute water resources, they can also be managed to provide environmental benefits. For example, animal husbandry sustains small crop farms by improving the health and fertility of soils and increasing the efficiency of nutrient cycling through the deposits of their manure. Livestock

herders are helping to preserve wild-life-enriched ecosystems that have been under their stewardship for thousands of years. And although cattle, goats, sheep and other ruminant animals generate greenhouse gases responsible for global warming, Africa's livestock contribute only a small part of these livestock emissions (Phil Thornton). We need more research to assess the trade-offs in livestock development and environmental health to ensure that poor communities are helped rather than hurt by our science-based technologies and other agricultural interventions – and are able to sustain their farming systems over the long term.

Sources for more information can be found at:
www.rural21.com

Zusammenfassung

Der Ausbau der Tierproduktion hilft den Entwicklungsländern dabei, alle acht Millenniums-Entwicklungsziele (MDGs) der Vereinten Nationen zu erreichen. Bei unsachgemäßem Management können jedoch Tierhaltungsbetriebe die Umwelt schädigen, zur Verbreitung von Infektionskrankheiten beitragen und die öffentliche Gesundheit durch unsichere Lebensmittel gefährden. Durch die Förderung von Politiken, Strategien und Technologien, die helfen, den enormen Gewinn der Viehzucht

für arme Gemeinden auszuschöpfen und gleichzeitig ihre negativen Auswirkungen zu beherrschen, können wir sicherstellen, dass wir das große Potenzial der Tierhaltung zum Erreichen der MDGs nutzen.

Resumen

La expansión de la ganadería está ayudando a los países en desarrollo a alcanzar todos los ocho Objetivos de Desarrollo del Milenio de las Naciones Unidas. Sin embargo, si no se administran apropiadamente, las empresas ganaderas pueden

también dañar el medio ambiente, hacer surgir enfermedades infecciosas y poner en peligro la salud pública a través de alimentos no seguros. Podemos asegurarnos de aprovechar al máximo el auge ganadero para alcanzar estos importantes objetivos de desarrollo. Para ello debemos recurrir a políticas, estrategias y tecnologías que sirvan para poner de relieve los beneficios extremadamente positivos que la ganadería puede traer consigo para las comunidades pobres, siempre y cuando a la vez mitigemos sus impactos negativos.