



How protecting farm animal welfare can boost jobs and livelihoods

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Local and informal supply chains provide food, social capital and food security to livestock owners

Animal welfare is essential for the development of sustainable food systems and is of increasing importance to consumers across the world. Livestock are an important contributor to food security and livelihoods: they provide food, income and assets; contribute to crop production; and provide a social safety net for their owners.

However, increasing animal productivity to meet the growing demand for food has resulted in unintended consequences for jobs, livelihoods and food security, without always benefitting the poor. Intensive production is also associated with large-scale environmental impacts and poor welfare for billions of animals.

This briefing explores how improvements to animal welfare can boost the livelihoods of livestock owners and others employed at various steps of the food chain, and create jobs. Contrary to perceived wisdom, improvements in animal welfare do not necessarily lead to an increase in production costs as they can be introduced in the framework of other measures to advance the sustainability of the livestock system.

These improvements will bring major benefits to producers and food businesses, projecting a socially-responsible image and sustaining growth and resilience. Small-scale farmers and operators can also be supported in the transition to more organised food chains, creating jobs and livelihoods and protecting the welfare of animals. The briefing concludes with policy recommendations to promote humane sustainable farming.

The revolution in the journey from farm to plate

In recent decades global livestock production and consumption have undergone radical changes which have been termed a “livestock revolution”.¹ These changes are altering the steps from farm to plate and determining what, how and when we eat. This ‘revolution’ heralded a transition from buying in local markets

Types of livestock supply chains and associated animal welfare issues

Local and informal	Semi-regulated	Formal
Characteristics		
<ul style="list-style-type: none"> • Supplied by small-scale producers • Short chains (farmers sell mostly locally and often directly to the final consumer) • Independent operators • Limited regulations • Important in developing countries • Mostly extensive and backyard systems 	<ul style="list-style-type: none"> • Wide variety of producers, traders and retailers • Long chains (sometimes crossing international borders) • Operators linked by a variety of agreements and/or contracts • More regulation but limited enforcement given the complexity and number of operators • Important in developing countries • Intensification of production 	<ul style="list-style-type: none"> • High degree of integration of steps from farm to plate • Short chains (easier to map and enforce regulation) • Supply is planned and farmers often produce under contract to large companies • Higher level of technology and regulation
Animal welfare issues		
<ul style="list-style-type: none"> • Lack of feed and water, particularly during drought periods • Ill health due to lack of vaccination and veterinary care • Inhumane slaughter 	<ul style="list-style-type: none"> • Intensification can start compromising animal welfare (see formal chains) • Inhumane handling and slaughter during outbreaks of disease • Inhumane transport, sometimes over long distances 	<ul style="list-style-type: none"> • Ill health (lameness, mastitis, respiratory disorders) • Practices and systems that prevent basic animal behaviours (such as battery cages for hens, sow stalls for breeding pigs) • Mutilations (such as beak trimming in hens, tail docking in pigs)

or directly from the farmer to highly organised chains where often one operator controls all the steps from farm to plate and in which animals and external inputs such as feed cross international borders.

A broad general trend is that as countries become wealthier and more urbanised, a smaller number and proportion of the population works in agriculture. As countries develop economically, there is a transition from the strong dominance of local and informal supply chains to a growth in the importance of semi-regulated chains. This is followed by an expansion of formal chains, often initiated by large companies. As formal chains become more prevalent, they have limited influence on local and informal chains, but compete strongly with semi-regulated chains, which eventually collapse.

Drivers for this trend include economies of scale within both production and retail. In addition, many countries subsidise inputs such as feed, fuel or fertiliser or provide support biased towards large-scale operations. Regulations may apply to production or slaughter practices, animal movements and animal health, which favour more organised formal chains.

Implications for jobs and livelihoods

Within local and informal supply chains, livestock provides not only a source of food for owners and their families but also transport, manure (fertiliser or fuel), social capital, cash income and stability to their food supplies and income.

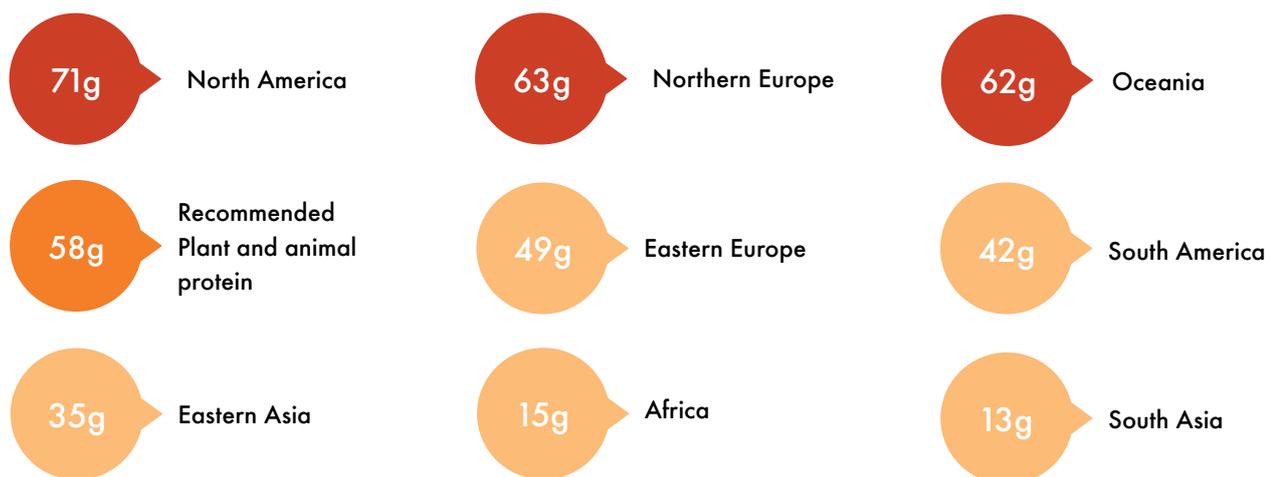
Food production for sale becomes more important in the semi-regulated chains and these create a great deal of employment

beyond the farm, with numerous small operators involved in marketing, processing and retail. In the formal supply chains there are limited employment opportunities on farms, where small numbers of people are needed per livestock unit. However, more employment is generated in other parts of the supply chain and for monitoring and certification of product quality.

When economic growth and urbanisation result in formal chains becoming more predominant, there are consequences for producers, traders and processors. It is not always possible for people to meet the demands of transition, which may require scaling-up of livestock enterprises or investment to meet food safety regulations. While the boundary between the local and informal and semi-regulated chains is quite fluid, with the same farmers supplying both at different times of year or with different products, few producers, traders and processors manage the transition to a formal chain.

These changes have resulted in a growing supply of food for urban populations but have not always been positive for livelihoods and for the poor. The transition to formal chains has resulted in small-scale producers, traders and retailers gradually losing their livelihoods. Opportunities for employment may open up in processing and retail, but these often call for different skills; in response people may need to migrate to a new area in search of employment. Rapid changes such as those following the outbreak of animal disease result in livelihood shocks that are even harder for families to deal with.

Average consumption of animal protein per person per day across regions



Unintended consequences

The transition towards formal supply chains has enabled an ever increasing amount of livestock products for urban consumption, while at the same time failing to provide food security for all or cushion millions of urban poor against food security shocks caused by global economic turmoil. Livestock contribute to both energy and protein requirements in the human diet but there are huge disparities in distribution.

Animal protein is not equitably distributed: Livestock provides approximately 1,000 kilocalories per person per day in Oceania and North America (representing around 30 per cent of energy supply), but just 207 kilocalories per person per day in Africa (representing a mere 8 per cent).

While the consumption of animal protein alone exceeds the safe levels for human health of 58 grams per adult per day in North America (71 grams), Oceania (62 grams) and Northern Europe (63 grams), an increase in the average level of consumption of protein would be beneficial in Africa (currently only 15 grams) and South Asia (13 grams).²

The expansion of intensive livestock systems has brought with it a huge demand for concentrate feed, much of which is shipped from country to country through global supply chains. In the past 30 years large areas of pasture, small-scale agriculture and virgin forest in South America have been converted to soybean production. In some instances, large-scale soya production has displaced small-scale farmers and communities, who can no longer find employment. Large-scale soybean production is highly mechanised and does not provide employment for displaced farmers.

At the same time, there are concerns around the increasing amount of grain being diverted to animal feed and competition with food for humans. This is already a pressing concern in countries with growing populations and will become even greater in the future as competition for land grows. Intensification has

been associated with high environmental impacts, particularly water pollution and greenhouse gas emissions. It is urgent to address the negative economic, social, environmental and animal welfare impacts of intensification, otherwise they will compromise the ability of the livestock sector to provide the much needed food, income, assets and social safety for a growing human population.

Animal and human welfare hand-in-hand

Today, legislation, voluntary agreements and preferential purchasing by food companies and retailers are being introduced in various countries with positive results for animal welfare and for businesses, but much more needs to be done in order to achieve a fair deal for animals in the 'livestock revolution'. Animal welfare improvements can be introduced at certain steps of the food chain or through systematic labelling and certification of production systems, with major benefits for animals, jobs and livelihoods.

Improvements to animal welfare in extensive production can pay for themselves

Welfare in extensive production depends on an adequate supply of fodder, water and shelter, protection from predators, prevention and treatment of health problems and good handling. Ranchers and pastoralists must use suitable breeds of animals, plan for the provision of feed during droughts, and adjust stocking rates according to climatic conditions. There is a very strong link between the welfare of pastoralists' animals and the livelihood of their owners, therefore the value of animal welfare is obvious to pastoralists and other actors in the extensive food chain. Provision of adequate fodder and animal health services will go a long way to improve animal welfare, productivity and livelihoods in these systems: stabilising the availability of forage would allow animals to weather droughts or fetch higher prices if they are sold during emergencies; some diseases can cause high mortalities



Pastoralists see a clear link between good animal welfare and their livelihoods

which are devastating for livestock owners but preventable through vaccination.

In addition, humane handling can reduce losses from bruising and stress and improve worker safety.

Improvements to animal welfare in transport and slaughter make economic sense

Improving welfare during transport and slaughter makes good economic sense and has demonstrable benefits for animals, productivity and worker health and safety. Research in Uruguay, for example, estimated that 48 per cent of all beef carcasses ended up with at least one lesion and the loss of 2 kilograms of meat.³ Country-wide, this was the equivalent to the loss of US\$100 million or 3,000 tonnes of meat annually.

A number of projects are now being implemented by producers, academics and the Uruguayan government to reduce these losses.³ Making transporters financially accountable for bruises, poor meat quality and loss of animals can improve handling and transport. In one example in Brazil, bruising in cattle was reduced from 20 per cent to just 1 per cent through this measure alone.

Improvements to animal welfare are led by systemic change

The largest gains in animal welfare will come from systemic change in formal chains that represent the largest numbers of animals globally. There are ways of managing the process to keep costs of the transition down. For example, if battery cages for laying hens were banned by the top global producers this would probably raise production costs slightly. Even if costs are passed on to consumers, this might not result in major changes in consumption (egg consumption changes little with small rises in price) at least among middle class consumers. The food industry needs to be involved to keep the cost of the transition minimal, in order to minimise price rises that could affect poor consumers.



Efforts need to be widescale to be attractive to the industry. Reducing the costs associated with uncertainty with well planned and widely adopted changes in animal welfare is likely to be attractive to all commercial producers. Changes can be introduced in the framework of other measures to improve the sustainability of the livestock system. This will project a socially responsible image and sustain growth and resilience, bringing major benefits to producers and food businesses.

Improvements to animal welfare create high value markets

Certification of high welfare products such as organic or free range is another example where producers profit from higher prices and the whole supply chain can benefit. It is more likely to work where a formal market chain is involved and standards can be monitored and enforced.

A number of successful examples exist both in developed and developing countries, from small-scale producers to country-wide certification programmes such as the Farm Assured Namibian Meat scheme where standards that include animal welfare are contributing to the success of the meat industry and to social, economic and environmental stability in rural areas.⁴ In developing countries, it is often the case that traceability and bio-safety have more appeal to consumers so high animal welfare products would have to combine these attributes.

Improvements to animal welfare are a catalyst for transition that supports humane small-scale operators

Small-scale commercial producers and operators are more likely to stay in business when they are supported by appropriate marketing systems. This is especially true for the dairy sector, which does not undergo the same economies of scale as poultry and pigs. There are numerous benefits for animal welfare and livelihoods from this approach. Animals managed in smaller groups or breeds that are well adapted to the local conditions can benefit from good health and welfare.

In India, as in Kenya, the majority of milk is produced by small-scale farmers and traded in semi-regulated food chains. In India, for every 1,000 litres of milk produced per day, 74 jobs are created in milk sales, processing and retail, representing something in the region of 1.8 million jobs nationally.⁵ In Kenya, every 1,000 litres of milk produced generate on average 18 jobs and employees in formal processing and marketing, earning three times the official minimum wage.⁵



For every
1,000
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produced in
Kenya...



18

18 jobs are created...

At **three-**
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Conclusions and recommendations

Animal welfare is essential for the development of sustainable food systems. There are a number of approaches to livelihood-friendly animal welfare that could be implemented in parallel. They vary in scale and the likely speed and ease of implementation; some of them are already being put into practice by a variety of stakeholders but much more needs to be done to achieve a fair deal for animals.

- ❖ The largest gains in animal welfare will come from systemic change in formal chains that represent the largest numbers of animals. Replacing extreme confinement systems, such as cages for laying hens, sow stalls, high stocking rates for broilers and fattening pigs, with more humane systems is a long-term but vital goal to assure the sustainability of food systems. The costs of the transition can be minimised for producers and consumers through planned and widely-adopted changes in animal welfare.
- ❖ The most rapid results and immediate positive impacts on livelihoods may come from working on a smaller scale on specific practices such as improving animal welfare in extensive systems or during transport and slaughter. This work could be done in parallel with the preparation of practical toolkits for knowledge transfer, documenting practical experiences to be replicated in similar settings.
- ❖ The certification of high welfare products from small-scale commercial producers can support the livelihoods of some of those squeezed out of the market for mainstream commodities

- ❖ Finally, small-scale commercial producers and operators can stay in business for longer when they are supported by appropriate marketing systems. There are great benefits for animal welfare and this would avoid many small-scale producers and operators being excluded by intensification and scaling up.

These approaches will require commitment from governments, intergovernmental organisations, donor agencies and the food industry based on the recognition that livestock have a fundamental role in lifting people out of poverty and building livelihoods.

It is vital to promote and support humane integrated livestock farming through investment in research and development. Specific and regionally sensitive policies and measures need to ensure that the food supply does not only satisfy current and future needs but is also both humane and sustainable. To create a level playing field, all stakeholders must (1) urgently address the current support via subsidies and public investment to large scale industrial livestock operations, and (2) recognise and address the challenge of unsustainable demand for farm animal products in some regions.

Acknowledgments

This briefing is largely based on a longer report by Anni McLeod and Andrew Sutherland at IDL Group commissioned by World Society for the Protection of Animals in 2012 and entitled Animal production systems and supply chains: their role in providing employment and livelihoods security, and some implications for animal welfare.

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2 FAOSTAT <http://faostat.fao.org> [Accessed 29 May 2014]
3 Huertas, S. (2010). Good Management Practices in Beef Cattle, Presentation for the workshop Low cost practices and tools to improve farm animal welfare, 31 May- 1 June. Jaboticabal, Brazil.
4 The Farm Assured Namibian Meat (FAN Meat) scheme assures quality and traceability standards. It is administered by the Meat Board of

Namibia - an independent body representing all major stakeholders of the meat industry - in close association with the Directorate of Veterinary Services, export abattoirs and the livestock producers of the country. See www.nammic.com.na/fan.php [Accessed 22 February 2012]
5 Dugdill, B.T., Bennett, A. Phelan, J. & Scholten, A. (2013). Chapter 8 Dairy Industry Development Programmes: Their Role in Food and Nutrition Security and Poverty Reduction. In E. Muellhoff, A. Bennett & S. Redfern (eds). Milk and Dairy Products in Human Nutrition. Rome, FAO.

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Front cover image: Cowboys on São Marcelo ranch in Mato Grosso State, Brazil, use white flags to move cattle instead of striking or shouting. This reduces bruising and stress, resulting in better animal welfare and productivity.

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