

Should we eat less meat to increase food security?

Vicki Hird and John McDermott disagree

Dear John,

Global livestock consumption has such a massive impact on our planet. It uses 26 per cent of the earth's ice-free land surface for grazing and 33 per cent of cropland for feed production. Livestock production produces 18 per cent of global greenhouse gas emissions (GHG), as well as loss of forests and biodiversity, overuse and contamination of water, and the huge costs of food-borne diseases.

But these headlines do not reveal how the huge growth in meat consumption over the past decades has been driven by a massive expansion of industrial-scale livestock systems: highly bred animals mainly housed and fed grain and protein produced far from the farm.¹

Of particular concern is the destruction of forests and habitats in South America to make room for huge plantations to grow soy – a third of which comes to Europe to feed our intensively housed pigs, poultry and cows. This is pushing small farmers and forest communities off their land. Yet it is not even an efficient use of crop land as animals are highly inefficient converters of plant matter to protein.

Meat-hungry western consumers can still eat meat and dairy, but less of it and only from sustainable, humane production using home produced feeds. We should debate how we achieve that.

Yours, Vicki

¹ www.foe.co.uk/resource/briefings/livestock_impacts.pdf

Dear Vicki,

The livestock sector does have a massive impact, both positive and negative, on the environment and people's welfare.

But global trends hide important differences. Rich people should consume less meat, poor people more. The consumption boom is in poorer countries. Production systems vary greatly. Industrial production has expanded without counting environmental costs. Livestock production on 450 million small farms in developing countries is very different. Animals don't eat grain but roughage and provide draught power and manure for crops. Families with little land rely on livestock for incomes and savings.

How do we improve the livestock sector? Deforestation and agricultural expansion are largely driven by socio-economic factors. Environmental sustainability must accommodate people's livelihoods. In this context, we must improve the accounting for environmental externalities in developing workable regulations and incentives. In rich countries, consumption might be reduced through a combination of reducing subsidies and increasing taxes and environmental payments. In poorer countries, regulation will be more difficult but should start in industrial systems which have sprung up in Asia, especially for pigs and poultry, in response to demand.

For small farmers, incentives are more appropriate. These can target redistributing livestock more appropriately and promoting smarter practices to intensify crop-livestock systems with greater production from fewer resources.

Yours, John

Dear John,

So we agree – the headlines were hiding the specific environmental and social damage industrial livestock systems cause.

Extensive, pastoral, usually mixed farming in developing countries has an impact too, including greenhouse gas emissions. But, as you say, these 'multifunctional' systems provide much needed protein, as well as income, collateral, and even fuel and fertilizers for low income communities. But following the intensive, high-input model of the West is not the answer for increasing protein consumption and could result in major environmental, social and health problems. Modelling we commissioned,¹ of different scenarios of consumption, production, land use and technologies, shows that feeding the world in 2050 is possible without the most intensive forms of animal and crop production or a massive expansion of agricultural land. And we can still eat meat up to three times a week.

To do this, regulation in richer countries is vital. We need changes to farm subsidies and taxation; public procurement of meat and dairy; and investment in agriculture in the UK and via international financial institutions like the World Bank. We also need to raise public awareness and change behaviour in rich countries. This will take a while to have an impact, so must start now.

Yours, Vicki

¹ www.foe.co.uk/resource/briefings/eating_planet_briefing.pdf



Dear Vicki,

We have important alignment but our words would differ. Building basic agreements is essential to combine evidence and practical action effectively in improving the livestock sector. Recent headlines from America¹ proclaim that livestock has no influence on climate change to counter claims demonizing livestock. How do we close the selective-evidence divide on both sides of this debate?

What are key areas in which better evidence is critical? One is the estimation of environmental costs and resource use efficiencies. Current debates reflect the considerable complexity of allocating costs and estimating relative benefits, as we need to recognize that some industrial practices are very efficient. This evidence will underpin decisions on how to make better use of different types of land and biomass. Initial targeting of livestock-environment impacts can be improved, and I see some recent progress. As argued, environmental and socio-economic priorities must be combined to assess tradeoffs effectively and develop equitable and sustainable solutions.

We agree that initial interventions should be in rich countries and industrial systems. Brazil, Russia, India and China need to be included early, given their global importance. However, I fear that needed actions won't happen quickly. To accelerate the process, it is urgent to initiate dialogue between important actors.

Yours, John

¹ <http://www.washingtontimes.com/news/2010/mar/23/meat-dairy-diet-not-tied-to-global-warming/>

Dear John,

Those recent headlines from America were hugely misleading. The Food and Agricultural Organisation's calculation remains accurate: livestock is responsible for 18 per cent of global greenhouse emissions and major South American land use change. The problem was the FAO comparison with global transport based on an underestimation of transport's emissions, not on an overestimation of livestock's emissions.

You say some industrial systems are 'very efficient' – in terms of conversion of feed into protein, emissions per kilo and so on? Perhaps, but we also have to assess what that does for urban and rural consumption; whether the production is for export; who gains from the trade. Putting aside the significant animal health and welfare, labour standards, disease load, antibiotic use, water use, and local pollution issues associated with 'industrial', if we drive demand by making it cheap we will end up with greater need for feed crops. Yet conversion rates are higher if people eat the cereals and proteins directly, however 'efficient' the system.

I agree we need to make sure that evidence is accurate and mitigation options have impact assessments. Can we afford to wait for a perfect evidence base before we act? We think not. We have presented a Sustainable Livestock Bill in Parliament to kick start the dialogue on vital UK action.

Yours, Vicki

Dear Vicki,

Whatever consensus emerges on the relative levels of greenhouse gas emissions generated by different sectors, what is most important is to understand what livestock production practices can and should be improved and how. The Sustainable Livestock Bill is a call to action. But before taking broad action, we should use the best available knowledge to design and test interventions in pilot studies. With phased learning, we can develop consensus as we obtain better evidence.

The biggest global change is the growing importance of emerging and poor countries. In these countries, 450 million poor households and over one billion people rely on livestock to better their incomes, their nutrition and their livelihoods.

Smarter livestock production practices in developing countries can provide incomes for the poor while meeting growing demand for milk and meat and improving natural resource management. But such 'smart' practices will work only if markets start working for rather than against the poor. And we need to improve the efficiency of small-scale livestock systems while shifting production away from forests to robust drylands and, in wetter regions, to intensive mixed crop-livestock-free production systems.

In short, smart livestock intensification can help us meet a triple bottom line: less hunger, less poverty and a better environment.

Yours, John

Other current initiatives on food security are Food 2030, the government's new food strategy (see www.defra.gov.uk/foodfarm/food/strategy/), and the Foresight Project on Global Food and Farming Futures, due to be launched in November 2010 (see <http://xr.com/06y>).



Dr John McDermott is Deputy Director General of Research, International Livestock Research Institute www.ilri.org
j.mcdermott@cgiar.org



Vicki Hird is Senior Food Campaigner at Friends of the Earth www.fixthefoodchain.org
vicki.hird@foe.co.uk