

# *Food First* BACKGROUND

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## China and Industrial Animal Agriculture: Prospects and Defects

This Backgrounder is based on a longer report by Mia MacDonald and Sangamithra Iyer published by Brighter Green; with assistance from Food First Intern Ellen Perry Tyler

Much has been made about rising meat consumption in China as one of the causes of the world food crisis. However, little mention is made of the *way* China is now producing meat, and the direct involvement of U.S. and Brazilian agribusinesses that profit from industrial meat production. The spread of the corporate-driven industrial agrofoods model to China may have a much larger and negative social and environmental impacts on China—and the rest of the world—than the increase in Chinese meat consumption in and of itself... [editor's note].

China is now the world's largest producer—and consumer—of agricultural products. As its rapid economic expansion has allowed more and more Chinese to enter the new middle class, meat has moved from the side of the dinner plate to the center. In the past ten years, consumption of China's most popular meat, pork, has doubled. In 2007, China raised about 700 million pigs. Since 1980, meat consumption in China has quadrupled to its current level; about 119 pounds per person each year (just over what people in the U.S. eat), and is rising.

For many Chinese, meat and dairy products signify wealth, status, modernity, freedom, and a welcome escape from hardscrabble lives in the countryside. "When I was a child, every person was allotted one pound of pork a month," recalls Peter Li, who grew up in southeast China and now teaches political science at the University of Houston. "Now, though, more people have access to more meat and want to eat a lot of it."

In recent decades, China has opened its doors to investments by major multinational meat and dairy producers, as well as animal feed corporations, including Tyson Foods, Smithfield, and Novus International. These corporations, joined by the International Finance Corporation (the private-sector lending arm of the World

Bank), and the Chinese government are championing the intensive systems of raising farmed animals commonplace in industrialized countries: small cages for egg-laying hens; metal stalls for pigs; sheds holding thousands of meat or broiler chickens; and feedlots for dairy and beef cattle.

Already, Western-style fast food is a \$28-billion-a-year business in China. McDonald's has nearly 1,000 outlets, and Yum Brands, with 2,500 KFCs and Pizza Huts in China, estimates that within a decade, 40 percent of its profits could come from its Chinese operations. Even though it's not yet a fully-fledged "factory farm nation," the strains from China's fast-growing livestock sector, and burgeoning appetite for animal protein, are showing—in massive water pollution, soil degradation, rising rates of obesity and chronic disease, risks to food security, and declining farm animal welfare.

Given that China has 1.3 billion people, even small increases in individual consumption have enormous collective environmental, climate, and agricultural impacts. More than 50,000 factory "farms" operate in China today; three times the number in the U.S.

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## Lovin' It?

Meat and dairy production already uses 30 percent of the Earth's land surface, 70 percent of agricultural land, and is one of the key agents of water pollution and deforestation globally. In addition, according to the UN Food and Agriculture Organization (FAO), fully 18 percent of global greenhouse gas (GHG) emissions stem from the livestock industry. China recently surpassed the U.S. as the world's top emitter of GHGs, and multiple GHGs are generated at every stage of livestock production.

Approximately 80 percent of China's larger-scale livestock facilities are located near densely populated cities. The manure from these operations is produced in such great quantities that very little can be used as fertilizer. Instead, most is discharged directly into waterways. The South China Sea contains a large "dead zone." Run-off from intensive pig production is a major factor. And in China's three most polluted freshwater lakes, much of the nutrient residue is due to farmed animal waste.

Research by Xu Cheng, a professor at China Agricultural University, indicates that China's livestock produce 2.7 billion tons of manure every year, nearly three and a half times China's industrial solid waste level, with only three percent treated.

## Food Security and Feeding China's Pigs

Between 1959 and 1961, a period known as the "Three Bitter Years," a cataclysmic national famine took the lives of at least 30 million Chinese. Since then, ensuring a sufficient food supply has been a national priority in China. Even as China remained largely self-sufficient in food into the 21st century, economists, environmentalists, and food and agriculture policy-makers have wondered, given its huge population, "Who will feed China?" Now, as China's animal consumption continues to grow, there's a new version of the question: "Who will feed China's pigs?"

It takes between two and ten times the amount of grain to produce the same number of calories through livestock as it does through eating grain directly. China now allots 28.5 percent of its grain to animal feed, up from 13.3 percent in 1980. China is the world's largest importer of soy, receiving a net 33 million tons of it between 2007 and 2008. Brazil is China's largest source, followed by the U.S. Much of Brazil's soy is harvested in plots cleared in the Amazon rainforest, or the country's large savannah. Corn imports could soon follow, potentially fueling further rises in world food prices and increases in hunger in poor regions.

As its population has increased and urbanized, China has lost vast amounts of arable land. And it only had about one-third of the world's average level of arable land to begin with. Since 2000, China has been losing about one percent of its farm and grazing land each year. In northern China, the desert is expanding rapidly; dust storms from this region have hit Beijing, Korea, Japan, and even crossed the Pacific Ocean to the west coast of North America.

Chinese companies are already producing agricultural products for Chinese consumption in Congo, Cambodia, Laos, and Indonesia. The Chinese government has earmarked \$5 billion to produce food and cash crops in Liberia and other African countries over the next half-century. It is also rumored that China has acquired the right to farm 250,000 acres of corn in southern Zimbabwe, accounting, some analysts say, for China's reluctance to criticize the Robert Mugabe regime, despite documented abuses of the rights of opposition supporters and ruinous economic and social policies. In Mozambique, China is seeking large land leases for Chinese-run "mega farms" and cattle ranches (beef consumption is rising rapidly in China).

## Inequality, Disease

Even as decades of rapid economic growth has made it possible for many more Chinese to eat a diet much higher in animal protein than their parents or grandparents could, a direct result is a decline in key indicators of public health. Many in China's middle-class eat meat every day, sometimes at every meal, and diet-related chronic diseases now kill more Chinese than any other cause. At the same time, the FAO reports that (similar to the U.S.) 12 percent of the population is undernourished.

Data from China's Ministry of Health show that in the 1930s, 97 percent of the calories in the average Chinese diet came from grains and vegetables, compared to 63 percent in 2002. In 2008, a study found one in four adults in China overweight with nearly 20 percent of Chinese children under seven overweight as well.

Another public health concern is the widespread use of antibiotics by the industrial livestock industry, which has been linked to the precipitous rise in human antibiotic resistance. Antibiotic use can also increase the risk of animal-to-human disease. According to the World Health Organization, more than 90 percent of some bacteria in Asia can no longer be treated effectively with “first-line” antibiotics like penicillin.

Some experts see a link between the over-use of antibiotics in livestock and human deaths in China in 2005 from the *Streptococcus suis* bacteria that caused “blue ear” in China’s pigs. The bacteria may have become antibiotic-resistant.

## Animals and Markets

Animal welfare, as understood in the West, is a relatively new concept in China. Nevertheless, more Chinese are becoming aware of the health and environmental problems associated with intensive animal agriculture; a growing number of universities have student animal rights groups and vegetarian associations.

While the rights or welfare of farmed animals is not high on the government’s or agribusiness’ agenda in China, it is not wholly absent, according to Gu Xianhong, a professor at the Chinese Academy of Agricultural Science’s Institute of Animal Sciences.

“Recently, more and more consumers and policy-makers [have expressed] concern about how animal products are produced on farms,” Gu says. “They demand that the animals should be produced safely and humanely by observing sustainable development, environmental protection, food safety and animal welfare standards.” Another concern relates to standards set by importing countries, particularly the EU. Most of the pork sold in China doesn’t meet EU standards for animal welfare, closing off an export opportunity China would like to access.

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## POLICY VERSUS PRACTICE: THE WORLD BANK’S CAFOS

Various World Bank publications address confined animal feedlot operations (CAFOs), pointing to their harmful effects on animals, humans, and the environment. Even the International Finance Corporation, the private sector lending arm at the World Bank Group published a “Good Practice Note” stating that “Animal welfare is just as important to humans (as to animals) for reasons of food security and nutrition. Better management of and care for livestock can... address nutritional deficiencies and food shortages as well as ensuring food safety”<sup>1</sup> Moreover, a book written for the World Bank titled *Livestock Development: Implications for Rural Poverty, the Environment, and Global Food Security* offered a critical view of the current feedlot production of cattle, pigs, and poultry. The document declared that “A [sea of change] will be required from the

international livestock community to make people, rather than animals, the focus of livestock development. Focusing on the multiple functions of livestock and including poor non-livestock keepers as potential beneficiaries of livestock development deserve a higher priority than the former exclusive focus on increasing milk and meat output for urban consumers.”<sup>2</sup>

However, the livestock projects financed by the World Bank and other development banks (e.g., ADB—Asian Development Bank; IDB—Inter-American Development Bank), conflict directly with these policy recommendations. Numerous instances, past and present, demonstrate flagrant violations of their own state best practices. Cameroon, People’s Republic of China, Croatia, Mexico, Russia, Turkey, and Uruguay all have Bank projects that work to develop CAFOs. One of the most

egregious cases involved a \$93.45 million loan to China in 1999 to finance its six year “Smallholder Cattle Development Project.” According to the World Bank, “the project has... accelerated the industrialization process of cattle production, [and has] effectively integrated the dispersed breeding units (feedlots and breeding/fattening households) with the large market, and the big-scale-sequential industrial chain... has come into being”<sup>3</sup> Indeed, the project topped its stated goal of constructing 130 feedlots by actually creating 144 such facilities.

These cases represent only a portion of projects that contrast sharply with the policy recommendations made to the World Bank that explicitly warn of the negative effects of industrial livestock production. The gap between what the World Bank says and the projects it actually finances appears meaty, indeed.

<sup>1</sup> IFC. 2006. Animal Welfare in Livestock Operations. In Good Practice Note Number 6: World Bank Group.

<sup>2</sup> de Haan, Cornelius 1999. *Livestock Development: Implications for Rural Poverty, the Environment, and Global Food Security*. Washington DC: The World Bank.

<sup>3</sup> WorldBank. 2006. Implementation completion report on a loan in the amount of US\$ 93.5 million to the People’s Republic of China for a smallholder cattle development project. In Report #35962: World Bank.



## A Chinese Solution

As it further industrializes, globalizes, and seeks to modernize its system of food production, China will need to find “skillful means” to avoid the pitfalls industrialized countries have experienced as they undertook this transformation. The following recommendations offer the Chinese an alternate path:

- Complete a multi-sectoral analysis of current and future impacts of industrial animal agriculture, spanning climate change, arable land, water use and pollution, chronic disease, use of grain stocks, and the welfare of farmed animals.
- Redefine food security so it doesn't give priority to a meat-centered diet.

- Adopt policy measures to expand production of vegetables, fruits, legumes, and grains for domestic consumption.

- Require payment from the industry and specific facilities for the many “externalities” on which animal agriculture is dependent—water pollution, soil contamination, land degradation.

- Encourage political openness in policy-making so that voices questioning intensive meat production can be heard.

Meanwhile, China's growing environmental movement could consider:

- Including the issue of intensive animal agriculture within its analysis, raising awareness and advocacy

activities, and collaborate with civil society groups in both the North and South working on related issues.

and

- Civil society groups in the North and Global South addressing food security and justice, sustainable agriculture, and environmental and animal rights should find ways of exchanging experiences, insights, and resources with their Chinese colleagues.

For a copy of *Skillful Means: the Challenges of China's Encounter with Factory Farming*, in English, go to: <http://www.brightergreen.org/n.php?id=23>

For the Chinese version, go to: <http://www.brightergreen.org/n.php?id=28>

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