

SKILLFUL MEANS

THE CHALLENGES OF CHINA'S ENCOUNTER WITH FACTORY FARMING

CHINA'S RAPID INCREASE in consumption and production of meat and dairy products, and the ongoing industrialization of its animal agriculture sector, is having profound impacts on the country's environment, public health, and food security. Given that every fifth person in the world is Chinese, even small increases in individual meat and dairy consumption have broad social, political, and environmental impacts. Increasingly, what the Chinese eat and China produces affects not only China, but the rest of the world, too.

World's Largest Producer

As Chinese incomes grow, so does meat consumption. China's population of 1.3 billion people now eats approximately 157 billion pounds/lbs of meat a year, just over twice annual U.S. consumption levels. In the past ten years, consumption of China's most popular meat, pork, has doubled, to 92 billion lbs a year. Since 1980, overall meat consumption in China has quadrupled to its current level, 54 kilograms/kgs (119 lbs) a person each year, about half the annual per capita meat consumption of the U.S. (around 100 kgs or 220 lbs).

China is now the world's largest producer of both pigs (700 million a year) and "meat" chickens, and raises two-thirds of the world's domestic ducks. In fact, China is the world's largest producer of agricultural products: it grows 20 percent of the world's corn, 30 percent of its rice, and is a major exporter of garlic, apples, vegetables, and farm-raised shrimp.

Increasingly, the Chinese government is looking toward an industrialized livestock sector to boost production levels to meet growing demand, which is at once being shaped by global forces and, in turn, affecting how the rest of the world responds. China has opened its doors to investment in animal agriculture by major multinational meat and dairy producers, as well as animal feed corporations, including Tyson Foods, Smithfield, and Novus International, private equity firms like Goldman Sachs (which



in 2008 bought ten intensive poultry farms in Hunan and Fujian provinces for U.S.\$300 million), and even the private sector arm of the World Bank.

Meanwhile, fast food in China is a \$28 billion-a-year business, and is fast expanding. Yum Brands operates 3,000 KFCs and Pizza Huts around the country and may eventually have 20,000 outlets in China alone. McDonald's, a major sponsor of the 2008 Beijing Olympics, games, has more than 1,100 outlets in China, and plans to increase this number to 2,000 by 2013.

Demand for Feed

Expanding demand for animal products in China is fueling demand for feed for farmed animals. This is a contributing factor in the rising costs of staple grains that is affecting food security in China and globally.

China now allots 28.5 percent of its grain to feed livestock, more than double the 13.3 percent allotted to livestock in 1980. In 2010–11, China looks set to import 3.5 million metric tons of corn, including from the U.S., more than doubling current import levels, despite having "more than enough" corn to meet demand, according to Zeng Liying, deputy director of the State Administration of grain.

Until recently a net exporter of soybeans, China is now the world's largest importer of soy, a major component of animal feed. In 2010, China is expected to buy 55 million tons of soy in global markets, a record. More than half of the soybeans traded on world markets are purchased by

China. This rising demand has been met in large measure by the expansion of soy acreage in Brazil, in the Amazon rainforest or Brazil's biodiverse savannah, the Cerrado. Currently, China purchases more than 40 percent of Brazil's soy.

Environmental Damage, and Climate Change

The effect of the livestock industry on the environment is significant, requiring major resources in terms of land, grain, and water. China's farmed animals produce 2.7 billion tons of waste a year, and waste from livestock, including poultry, has become one of the leading sources of water pollution. In 2010, China released the most stringent survey yet undertaken of water pollution, which found agricultural runoff at an unexpectedly high 13.2 million tons—nearly equal to the previous total.

Runoff from chemical fertilizers and animal wastes have created a large "dead zone" in the South China Sea that is almost devoid of marine life. In northern China, overgrazing and overfarming have led to the loss of nearly a million acres of grassland each year to desert. Currently, a quarter of China is desert.

Climate-warming greenhouse gases (GHGs) are generated at every stage of livestock production. As China's livestock population increases along with the number of intensive facilities, associated GHG emissions will grow, too. China's per capita emissions of carbon dioxide (CO₂) have more than doubled from 2.1 tons of CO₂ equivalent in 1990 to 5.1 tons today.

Public Health Risks and Realities

The Chinese adoption of factory-farming methods to produce more meat at a cheaper price is also having visible public health consequences. The percent of energy derived from fat in the average Chinese diet increased by 10 percent in the decade from 1996 to 2006, and a 2008 study found that one in four adults in China are now overweight. More people in China now have diabetes—90 million or nearly one in ten adults—than in any other country.

Other consequences, however, are less direct, and perhaps more insidious: conditions of intensive animal confinement provide ideal conditions for epidemics like SARS, avian flu, and swine blue-ear to take root. In addition, overuse of drugs in farmed animals to promote growth and cut down on

disease have resulted in more than 90 percent of some Asian bacteria being resistant to treatment by "first line" drugs.

Policy Recommendations

Development in China is taking place at a pace without precedent in human history. The inevitability of China's development provides a set of challenges and opportunities for innovation on a scale and at a speed that could result in the forging of a new and resilient vision of sustainability:

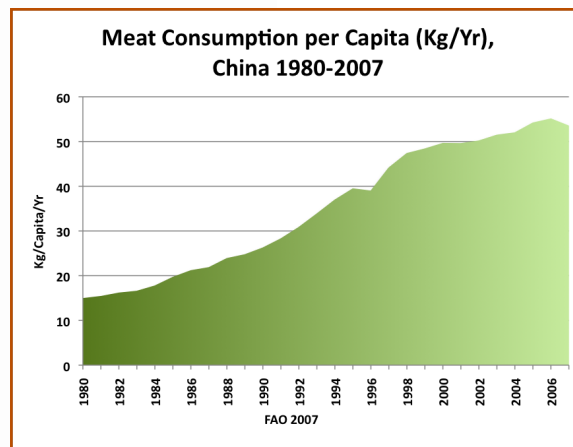
China's government should undertake a multi-sectoral analysis of the impacts of industrial animal agriculture now and in the future, and, with the participation of policy-makers, academics, and civil society, develop a comprehensive plan to ensure food security for its population without compromising social, economic, and environmental stability.

The government ought to redefine its conception of short- and long-term food security so it doesn't give priority to a meat-centered diet, and re-orient the agricultural economy toward supplying varied, nutritious, safe, plant-centered foods to all Chinese, regardless of social status, income, or where they live.

Government subsidies that support the expansion of industrial-scale livestock operations should be ended, and the "externalities" on which animal agriculture is dependent—water pollution, contamination of soil and groundwater, land degradation, and GHG emissions—should be paid in full by the industry and/or specific facilities that cause them.

NGOs in the North and South working on issues of environment; climate change; food security, sovereignty, or safety; rural livelihoods; and animal welfare should establish venues (including on the Web) for exchanging experiences, insights, and information with Chinese colleagues. ■

Photo: Brighter Green



This policy brief is based on the revised edition of Brighter Green's policy paper, *Skillful Means: The Challenges of China's Encounter with Factory Farming* (PDF) by Mia MacDonald and Sangamithra Iyer, and is published as part of Brighter Green's Food Policy and Equity Program. Additional policy papers in the series on climate change and industrial animal agriculture in Brazil, Ethiopia, and India, plus short documentary videos for each and resources on the globalization of factory farming, are available on Brighter Green's website: www.brightergreen.org