

VEG OR NON-VEG?

INDIA AT THE CROSSROADS

ETHICAL VEGETARIANISM HAS a several thousand-year history in India, rooted in the Hindu and Jain religions' commitment to *ahimsa* or non-violence. Vegetables, legumes, and grains lie at the center of the country's varied regional cuisines, even for Indian meat-eaters. But India is no longer a majority vegetarian nation. More than half of its 1.2 billion people consider themselves omnivores.

Numbers Rising

The average Indian eats 3.26 kilograms of meat a year, less than one-sixteenth of levels in China, or one-thirty-fifth of those in the U.S. But national data masks vast disparities in access to, and consumption, among India's people. It is India's booming middle class—estimated to number between 30 million and 300 million—that is driving up demand for meat, eggs, and dairy products (milk has long been a staple of most Indian diets). For many Indians, particularly those in urban areas, owning a television, driving a car, wearing Western brand name clothing, or eating meat are symbols of affluence, independence, and even modernity.

India has the world's largest dairy herd (comprised of cows and buffalo), about 300 million strong, and is second only to the United States in production of cows' milk. India is also the world's fourth largest global producer of eggs and fifth largest of poultry meat.

Even though livestock-industry analysts predict that Indians won't ever consume as much animal protein as the Chinese or Americans do, the size of India's population, and its expanding middle class, mean small shifts can have large consequences.

New Markets and Intensification

While the majority of India's animal products are consumed domestically, exports are growing. India is the top global exporter of buffalo meat, and is also the fourth largest exporter of soybean meal, an important ingredient in commercial feed for farmed animals. In addition, India's leading poultry producers, including Suguna, Venky's, and the Amrit



Group, are increasing sales in other parts of Asia and the Middle East.

International investment is also expanding. In 2008, U.S.-based Tyson Foods acquired a 51 percent stake in Godrej, an Indian conglomerate that is a major producer of animal feeds and poultry, and the International Finance Corporation (IFC) has an equity stake in Suguna.

Methods of production look increasingly like those in industrialized countries. Approximately 80 percent of India's eggs come from the 140 million to 200 million egg-laying hens confined to small, wire "battery" cages stacked in rows in indoor sheds. About 90 percent of the 2-billion-plus "meat" chickens produced each year are factory-farmed. Vertical integration and contract farming for poultry and eggs is also widespread. While India's milk and cheese sectors still include many small-scale producers, and cows and buffalo in extensive systems, the number of factory-style dairy operations is increasing.

Food Inequality and Feed Grains

Middle class, urban Indians are eating more processed and packaged food, as well as fast food. Public health officials are raising concerns about the effects of such changes. In 2006, 15 percent of Indian women aged 15–49 were overweight or obese, as were 12 percent of men 15–49, with rates significantly higher in urban than rural areas. Fifty million Indians now suffer from diabetes.

Even as more Indians eat higher up the food chain, under-nutrition remains stubborn and persistent. Forty-four percent of Indian children under five are malnourished, and with prices of staple foods and climate conditions fluctuat-

ing, food security may become even more elusive. About 10 percent of India's coarse grains (maize, bajra, sorghum, and millet) are used for livestock feed. This is expected to rise, along with industry demand. Moreover, India's export of grains and oil meals for feed are growing. In 2008, maize was India's fourth largest commodity export in value (at U.S.\$780 million). Soybean meal was third, at about U.S.\$2 billion, and largest by volume (just over 5 million metric tons).

GHGs and Animal Agriculture

India is the world's fifth largest emitter of greenhouse gases (GHGs). Its overall emissions rose more than 50 percent between 1994 and 2007; still, per capita GHG emissions are extremely low: in 2007, just 1.7 tons of carbon dioxide equivalent (CO₂ eq). India's livestock, particularly the enormous population of cows and buffalo, are a significant source of GHGs. In 2007, the livestock sector produced 334 million tons of CO₂ eq. Enteric fermentation, from the digestive processes of ruminants, including cows, buffalo, sheep, and goats, is responsible for 63 percent of this or 212 million tons of CO₂ eq.

India's emissions of methane (CH₄) from livestock are larger than any other country's. Methane has at least 21 times the global warming potential of CO₂. Producing feed crops for farmed animals also has climate impacts, with significant quantities of CO₂ emitted through manufacture of chemical fertilizers and clearing of land and forests to make way for agriculture.

Ecological Realities

With 500 million cows, buffalo, goats, sheep, camels, pigs, and billions of chickens, 600 million farmers, and 1.2 billion people, the competition is on in India for natural resources. Water scarcity is a reality in all of India's states, and strains on land are often intense. Agricultural land per farmer is just .3 of a hectare, and an estimated 45 percent of land is degraded from over-grazing and over-production of crops. Animal agriculture is also a leading source of water pollution. By 2020, the World Bank concludes that India's water, air, soil, and forests will be under more pressure than those of any other country.

Global warming is expected to hit India particularly hard through rising temperatures, increased water scarcity, desertification, erratic monsoons, and more frequent and

more intense droughts, flooding, and cyclones. The summer of 2009's failed monsoon, which led to crop losses, soaring food prices, increased debt for farmers, and significant reductions in groundwater replenishment, offered a preview of potential future realities.

Policy Recommendations

Globalization and high rates of economic growth are transforming much of India, even as development needs—for schools, health care, clean water, decent housing, and sufficient food—remain immense. As an increasingly large player in the global economy and geopolitics, India has a chance to forge a new path toward sustainability and equity, and not just follow in the direction the industrialized world has pointed:

The government should make food security for all Indians a national priority, through access to a varied, nutrient-dense, plant-based diet, with a particular focus on addressing alarmingly high rates of child malnutrition. It should provide incentives to promote production of food crops that provide key nutrients, use less water than soybeans or feed grains, and are climate-change resilient.

The government, with civil society participation, ought to establish a national task force with regional input to assess the current state of the livestock sector and anticipated climate, resource, and population trends, and then develop a plan for a low-carbon food system. It should also support public education to encourage healthy eating among adults and children based on traditional, plant-based regional cuisines, with a view to avoiding more incidence of chronic disease and advancing food security.

The government should put a priority on development of less resource-intensive industries than livestock and feed grains. It should also adopt a law(s) on animal welfare that would end the abuses and cruelty inherent in factory-style production facilities. This would put India in the global vanguard and reflect its ethical and cultural heritage. ■

Photo courtesy of Wan Park

This policy brief is based on Brighter Green's policy paper, *Veg or Non-Veg?: India at the Crossroads* 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, China, and Ethiopia, plus short documentary videos for each and resources on the globalization of factory farming, are available on Brighter Green's website: www.brightergreen.org

