



AN INCONVENIENT LUNCH

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By Brenda Shoss

Seriously fat. That describes one in four adults in 2008.¹ Americans average 3,700 calories everyday. Most come from meat and dairy foods.² But the bloated nation faces more than heart disease and diabetes. It turns out the last thing on Al Gore's mind is the first thing to warm the planet.

The way animals become food — from feed crops to confinement and slaughter — churns out 18% of the world's greenhouse gasses, according to a United Nations' Food and Agriculture Organization (FAO) report, "Livestock's Long Shadow."³ At nearly 6.5 billion tons of CO₂-equivalent gasses per year, meat production yields more heat-sucking vapors than every car, truck, plane and ship combined.^{3, 4}

Al Gore's book/film, "An Inconvenient Truth," talks wind turbines, biofuels and the like. He even won the 2007 Nobel Peace Prize for environmental advocacy.⁵ Meanwhile Gidon Eshel, a Bard Center geophysicist, and Pamela A. Martin, a University of Chicago geophysics assistant professor, disclose another startling truth: If all Americans give up meat in just 20% of meals, it would be as if each swapped a sedan for a mega-efficient Prius.

In 2007 the National Institute of Livestock and Grassland Science in Japan figured 2.2 pounds of beef equals the sum of carbon dioxide a typical European car spews every 155 miles. On U.S. turf, livestock plants "emit as much greenhouse gas as a car driven more than 1,800 miles," Nathan Fiala writes in Scientific American (2/09).⁴

Meat scores higher than light bulbs too. A beef, lamb or pork cut expends enough energy on animal growth and transport to light a 100-watt bulb for 20 days, asserts Rajendra Pachauri, chief of UN's Intergovernmental Panel on Climate Change (IPCC).⁶ FAO scientists hold animal agriculture accountable for "the world's most pressing environmental problems...global warming, land degradation, air/water pollution, and loss of biodiversity."^{3, 7}

Where's The Beef? It's in America's belly — a whopping 50.2 billion pounds of beef, poultry and pork, as per USDA's 2008 National Agri-



cultural Statistics Service (NASS) Livestock Report.⁸ Nearly 63 billion land animals are butchered worldwide, reports USDA's Foreign Agricultural Service in 2007.⁹ Some 10 billion USA land animals, plus about 17 billion fish, die for human consumption each year.

Some environmentalists recycle, dim lights, save water, drive less and plant more. Their green goodwill, however, stops at the fork. Meat eaters in industrialized nations each down 176 lbs. a year. While individuals in developing countries ingest 66 lbs. year-round, that gap is closing.¹⁰ China beefed up exports 900% in the first quarter of 2008. Intercontinental meat intake may double from 280 million tonnes in 2008 to more than 500 million tonnes by 2050, predicts FAO's "Livestock's Long Shadow."³

Meat is among "today's most serious environmental problems," says Henning Steinfeld, "Shadow's" senior author and FAO's Chief of Livestock Information and Policy Branch. "Urgent action is required."¹¹ Just how urgent is up for grabs. Most agree that combustible fossil fuels (carbon-heavy coal, petroleum, natural gas, oil) trap atmospheric heat and cause a greenhouse effect. We know fossil-fuel energy is a non-renewable power source.

Science widely accepts basic global warming principles: Climate has changed more in recent decades than in 1000 years.¹² Human activity accelerates carbon dioxide emissions, with a 25% jump over 150 years.¹³ CO₂ rates will double by 2100, unless greenhouse gasses are drastically cut.¹⁴ Warmer land/water temps will advance extreme weather — drought, flood, fire, hurricane. Ecosystems will lose biodiversity, leading to extinction of entire species.¹⁴ Still, few want to view lunch as a weapon of mass pollution.

Gas, Burps And Poop. FAO analysts speculate that over 8% of water and 30% of ice-free land are involved in livestock production.⁷ Ruminants (cows, goats, sheep) occupy massive fenced feedlots. Meat, dairy or egg CAFOs (concentrated animal feeding operations) exhaust other areas. Cows, pigs, chickens, turkeys, ducks, geese, sheep and others are processed assembly-line style. For instance, half of all hogs live in industrial barns with 5,000 or more hogs, maintains USDA's Census of Agriculture.¹⁵

Monster farms deny pigs space, sunlight, straw, mud or anything fundamental to pigs. Breeding sows are immobilized in 2-foot wide gestation crates. Piglets suckle through metal bars. Animals are tail-docked, castrated and teeth-clipped without anesthesia. In 2008, 10.14 million pigs went to slaughter, some still alert on the kill floor.⁸

Animal cruelty is a hallmark of factory farms. So are belches, gas and poop. To grasp how much animals poop, imagine one dairy cow. She defecates a usual 14.475 gallons per day. Her waste equals that of 20 to 40 people, Environmental Protection Agency states. There are 9.1 million U.S. dairy cows.¹⁶ You'd need to multiply America's excrement output 130 times to match agri-animals.¹⁷

Close to 3 trillion pounds of animal waste annually fills football-field size lagoons teeming with dusts, molds, bacteria, heavy metals, ammonia, hydrogen sulfide, methane and more vaporizable elements. Cesspools seep into ground water and local aquifers, leading the EPA to dub CAFOs America's chief source of water contamination. Globally, animal agriculture is the top water polluter, contributing "wastes, antibiotics, hormones, chemicals, fertilizers, pesticides, and sediments," FAO says.⁷ Ruminant digestion also packs big Global Warming Potential (GWP). The FAO finds animals emit 65% of human-caused nitrous oxide, with 296 times more force to lock-in heat than CO₂. Animal waste releases 37% of methane gas, along with 64% of acid rain related ammonia.¹¹

The Organic/Free-Range Myth. Climate wise, "organic, free-range, home-grown" don't hold much clout. Cows "grown" in your backyard or on a farm still poop methane and fart nitrous oxide. U.K. Drs. Adrian Williams, Eric Audsley and D.L. Sandars of Cranfield University argue "there is little difference in nitrous oxide emissions between conventional and organic systems." Organic poultry and eggs actually up energy use by 30 and 15% respectively, due to longer growth spans. Free-range systems boost energy demands 15% for eggs and 20% for poultry. Land coverage also increases 65% for organic meat and milk.¹⁸

This presents a dilemma for guilt-free meat eating. On the one hand, free-range producers allegedly don't stuff 6 to 9 hens in filing-drawer sized cages. They assure consumers they won't cram turkeys inside dark grower houses or slice off the tip of each bird's beak. On the other hand, cruelty-free claims are routinely false — and organic/free-range operations don't really lower environmental impacts.

We Are What We Eat. Since 1961, a fourfold rise in world meat production has guzzled land, water and energy. Livestock now outnumber people 3 to 1. An estimated 50% (World Resources Institute) to 80% (Harvard nutritionist Jean Mayer) of U.S. grain crops fatten animals rather than feed people. While processors drain 16 pounds of wheat, soy and assorted grains, plus 2,500 gallons of water, on ONE pound of beef — 963 million people go to bed hungry.¹⁹ Grains consumed by U.S. livestock alone could feed 800 million, concludes ecology professor David Pimentel of Cornell University.²⁰ Agriculture devours so much space, forests are stripped into pastures. In Latin America, 70% of Amazon forestland is now grazing fields or feed crops.¹¹ The removal of CO₂-absorbing trees speeds global warming. Ultimately, livestock squeeze out native species. FAO findings show 15 of 24 key ecosystem functions in decline due to agri-animals.¹¹

Pass The Roast Beef Please? Dad's barbeque and Mom's roast say, "I care." Meat symbolizes prosperity, celebration, even love. In truth, we eat animals because we've always eaten animals — despite loads of protein-rich "mock meats" at supermarkets, health food stores and restaurants. Roughly 3% of adults don't eat meat, fish, or fowl (Vegetarian Resource Group). An additional 6.7% "never eat meat," without naming species.²¹ In VRG's survey of restaurant diners, more than half sometimes, often or always order meatless meals.²² College students rate access to vegan dishes as "important to them." Girls, 13 to 15, are the fastest growing meat-free demographic.²³

Nowadays it's a no-brainer to eat less meat or no meat. Grocers stock plant-based matches of ham, bacon, ground beef, cheese, milk and ice cream. Frozen food shelves are lined with soy "chicken" nuggets, seitan (a beef-like wheat protein), veggie burgers and ribs. **Car or meat? No contest. Meat leaves the heavier carbon footprint. Perhaps, while biking to work or buying compact fluorescent bulbs, you'll consider lunch — and for now, it won't come from an animal.**



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