

The Case Against Meat

Evidence Shows that Our Meat-Based Diet is Bad for the Environment, Aggravates Global Hunger, Brutalizes Animals and Compromises Our Health

December 31, 2001 | Jim Motavalli |



There has never been a better time for environmentalists to become vegetarians. Evidence of the environmental impacts of a meat-based diet is piling up at the same time its health effects are becoming better known. Meanwhile, full-scale industrialized factory farming—which allows diseases to spread quickly as animals are raised in close confinement—has given rise to recent, highly publicized epidemics of meat-borne illnesses. At presstime, the first discovery of mad cow disease in a Tokyo suburb caused beef prices to plummet in Japan and many people to stop eating meat.

All this comes at a time when meat consumption is reaching an all-time high around the world, quadrupling in the last 50 years. There are 20 billion head of livestock taking up space on the Earth, more than triple the number of people.

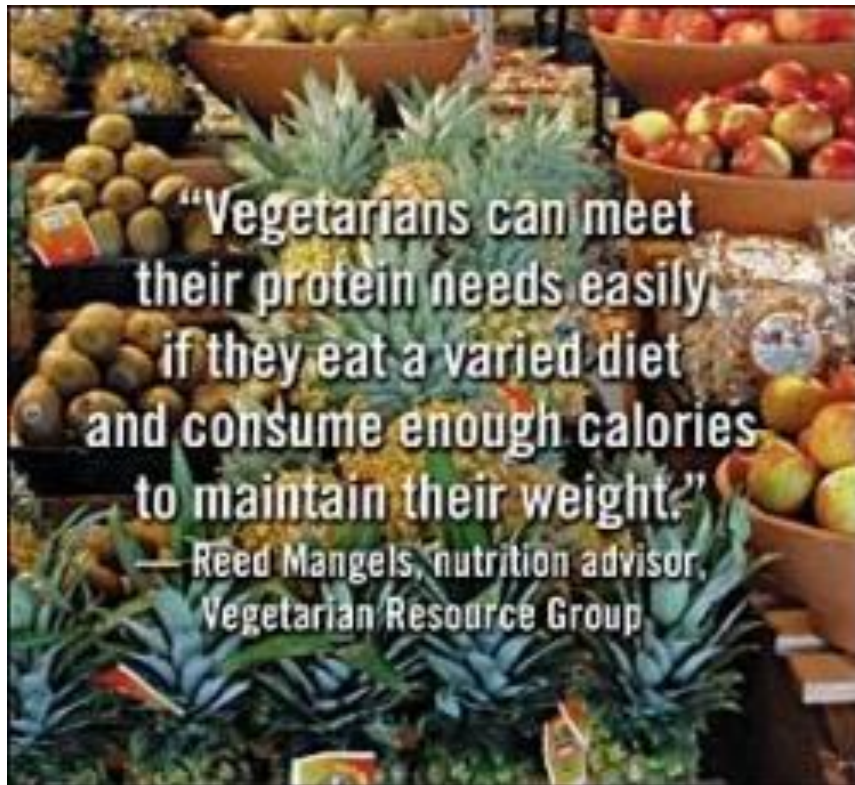
According to the **Worldwatch Institute**, global livestock population has increased 60 percent since 1961, and the number of fowl being raised for human dinner tables has nearly quadrupled in the same time period, from 4.2 billion to 15.7 billion. U.S. beef and pork consumption has tripled since 1970, during which time it has more than doubled in Asia.



Americans spend \$110 billion a year on meat-intensive fast food, and its growing popularity around the world may be a factor in dramatic increases in global meat consumption.

© Jason Kremkau

One reason for the increase in meat consumption is the rise of fast-food restaurants as an American dietary staple. As **Eric Schlosser** noted in his best-selling book ***Fast Food Nation***, "Americans now spend more money on fast food—\$110 billion a year—than they do on higher education. They spend more on fast food than on movies, books, magazines, newspapers, videos and recorded music—combined."



Strong growth in meat production and consumption continues despite mounting evidence that meat-based diets are unhealthy, and that just about every aspect of meat production—from grazing-related loss of cropland and open space, to the inefficiencies of feeding vast quantities of water and grain to cattle in a hungry world, to pollution from "factory farms"—is an environmental disaster with wide and sometimes catastrophic consequences. **Oregon State University agriculture professor Peter Cheeke** calls factory farming "a frontal assault on the environment, with massive groundwater and air pollution problems."

World Hunger and Resources

The 4.8 pounds of grain fed to cattle to produce one pound of beef for human beings represents a colossal waste of resources in a world still teeming with people who suffer from profound hunger and malnutrition.

According to the **British group Vegfam**, a 10-acre farm can support 60 people growing soybeans, 24 people growing wheat, 10 people growing corn and only two producing cattle. Britain—with 56 million people—could support a population of 250 million on an all-vegetable diet. Because 90 percent of U.S. and European meat eaters' grain consumption is indirect (first being fed to animals), westerners each consume 2,000 pounds of grain a year. Most grain in underdeveloped countries is consumed directly.



Somalian famine victims line up for food handouts. Producing a pound of beef requires 4.8 pounds of grain, and critics of our modern agricultural system say that the spread of meat-based diets aggravates world hunger.

© David & Peter Turnley / Corbis

While it is true that many animals graze on land that would be unsuitable for cultivation, the demand for meat has taken millions of productive acres away from farm inventories. The cost of that is incalculable. As **Diet for a Small Planet** author **Frances Moore**

Lappé writes, imagine sitting down to an eight-ounce steak. "Then imagine the room filled with 45 to 50 people with empty bowls in front of them. For the "feed cost" of your steak, each of their bowls could be filled with a full cup of cooked cereal grains."

Harvard nutritionist Jean Mayer estimates that reducing meat production by just 10 percent in the U.S. would free enough grain to feed 60 million people. Authors **Paul and Anne Ehrlich** note that a pound of wheat can be grown with 60 pounds of water, whereas a pound of meat requires 2,500 to 6,000 pounds.

Environmental Costs

Energy-intensive U.S. factory farms generated 1.4 billion tons of animal waste in 1996, which, the **Environmental Protection Agency** reports, pollutes American waterways more than all other industrial sources combined. Meat production has also been linked to severe erosion of billions of acres of once-productive farmland and to the destruction of rainforests.

McDonald's took a group of British animal rights activists to court in the 1990s because they had linked the fast food giant to an unhealthy diet and rainforest destruction. The defendants, who fought the company to a standstill, made a convincing case. In court documents, the activists asserted, "From 1970 onwards, beef from cattle reared on ex-rainforest land was supplied to McDonald's." In a policy statement, McDonald's claims that it "does not purchase beef which threatens tropical rainforests anywhere in the world," but it does not deny past purchases.



Circle Four Farms, a Utah-based pork producer, hosts a three-million gallon waste lagoon. When lagoons like this spill into rivers and lakes as happened in North Carolina in 1995, the result can be environmentally catastrophic. © AP Photo / Douglas C. Pizac

According to **People for the Ethical Treatment of Animals (PETA)**, livestock raised for food produce 130 times the excrement of the human population, some 87,000 pounds per second. The **Union of Concerned Scientists** points out that 20 tons of livestock manure is produced annually for every U.S. household. The much-publicized 1989 Exxon Valdez oil spill in Alaska dumped 12 million gallons of oil into Prince William Sound, but the relatively unknown 1995 New River hog waste spill in North Carolina poured 25 million gallons of excrement and urine into the water, killing an estimated 10 to 14 million fish and closing 364,000 acres of coastal shell fishing beds. Hog waste spills have caused the rapid spread of a virulent microbe called *Pfiesteria piscicida*, which has killed a billion fish in North Carolina alone.

More than 1/3 of all raw materials and fossil fuels consumed in the U.S. are used in animal production. Beef production alone uses more water than is consumed in growing the nation's entire fruit and vegetable crop. Producing a single hamburger patty uses enough fuel to drive 20 miles and causes the loss of five times its weight in topsoil.

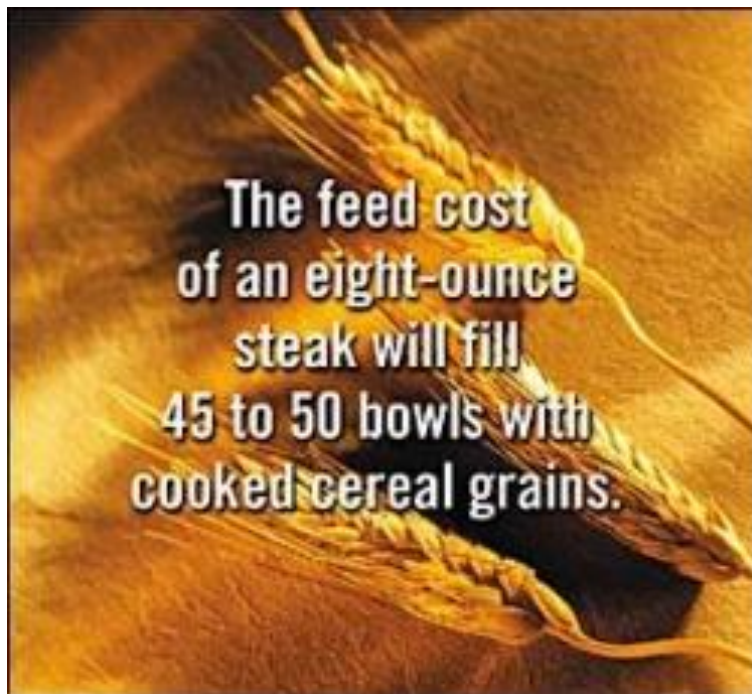
In his book **The Food Revolution**, author **John Robbins** estimates that "you'd save more water by not eating a pound of California beef than you would by not showering for an entire year."

Because of deforestation to create grazing land, each vegetarian saves an acre of trees per year.

"We definitely take up more environmental space when we eat meat," says **Barbara Bramble of the National Wildlife Federation**. "I think it's consistent with environmental values to eat lower on the food chain."

The Human Health Toll

There is some evidence to suggest that the human digestive system was not designed for meat consumption and processing (see sidebar), which could help explain why there is such high incidence of heart disease, hypertension, and colon and other cancers. Add to this the plethora of drugs and antibiotics applied as a salve to unnatural factory farming conditions and growing occurrences of meat-based diseases like E. coli and Salmonella, and there's a compelling health-based case for vegetarianism.



The factory-farmed chicken, cow or pig of today is among the most medicated creatures on Earth. "For sheer over prescription, no doctor can touch the American farmer," reported **Newsweek**. According to a **Centers for Disease Control and Prevention (CDC)** report, the use of antimicrobial drugs for nontherapeutic

purposes—mainly to increase factory farm growth rates—has risen 50 percent since 1985.

90% of commercially-available eggs come from chickens raised on factory farms, and six billion "broiler" chickens emerge from the same conditions. Ninety percent of U.S.-raised pigs are closely confined at some point during their lives. According to the book **Animal Factories** by **Jim Mason and Peter Singer**, pork producers lose \$187 million annually to chronic diseases such as dysentery, cholera, trichinosis and other ailments fostered by factory farming. Drugs are used to reduce stress levels in animals crowded together unnaturally, although 20 percent of the chickens die of stress or disease anyway.

One result of these conditions is a high rate of meat contamination. Up to 60 percent of chickens sold in supermarkets are infected with *Salmonella enteritidis*, which can pass to humans if the meat is not heated to a high enough temperature. Another pathogen, *Campylobacter*, can also spread from chickens to human beings with deadly results.

In 1997, more than 25 million pounds of hamburger were found to be contaminated with *E. coli* 0157:H7, which is spread by fecal matter. The bacteria are a particular problem in hamburger, because the grinding process spreads it throughout the meat. *E. coli*, the leading cause of kidney failure in young children, was the culprit when three children died of food poisoning after eating at a Seattle Jack in the Box restaurant in 1993.



Business as usual at the animal farm: From left: chicken debeaking, cow confinement, poultry transport and hog crowding.

The British epidemic of bovine spongiform encephalopathy (BSE), or mad cow disease, which began in 1986 and has affected nearly 200,000 cattle, jumps to beef-eating humans in the form of the always-fatal Creutzfeldt-Jakob Disease (CJD). The CDC reports that an average of 10 to 15 people have contracted CJD from meat in Britain each year since it was first detected in 1994.

In 1998, the **British Medical Association** warned in a report to Members of Parliament, "The current state of food safety in Britain is such that all raw meat should be assumed to be contaminated with pathogenic organisms." In 1997, it added, Salmonella or E. coli infected a million people in Britain. BSE spreads through cattle that are fed contaminated central nervous-system tissue from other animals. "Its future magnitude and geographic distribution cannot yet be predicted," the **CDC** reported. In the U.S., deer have been affected with chronic wasting disease, which has many similarities to British BSE, though a definitive link to humans has not been established.

In the book **Eating With Conscience**, **Dr. Michael W. Fox** reports that what is known as "animal tankage"—the non-fat animal residue from slaughterhouses—is used in a wide variety of products, from animal feed and fertilizer to pet food. Dr. Fox adds that hundreds of cats in Europe (and several zoo animals) that ate tankage-laced food have contracted forms of BSE. The Japanese outbreak is believed to have originated in BSE-contaminated feed imported from Europe.

According to the **U.S. Department of Agriculture (USDA)**, more than 10 million animals that were dying or diseased when slaughtered were "rendered" (processed into a protein-rich meal) in 1995 for addition to pig, poultry and pet food. Animals that collapse at the slaughterhouse door or during transportation are called "downers," and their corpses are routinely processed for human consumption. A 2001 Zogby America poll conducted for the group **Farm Sanctuary** found that 79% of Americans oppose

this practice, which could be an entry point for BSE into the U.S. meat supply. **Farm Sanctuary** petitioned the **USDA** in 1998 to end processing of downer meat for human consumption, but its petition was denied.

Europe will spend billions of dollars bringing a virulent epidemic of yet another animal-borne disease—foot-and-mouth—under control. In the last two years, 60 countries have had outbreaks of foot-and-mouth, which kills animals but does not spread to people.

One of the major western exports is a taste for meat, though it brings with it increased risk of heart disease and cancer. Clearly, there is something seriously wrong with a diet and food production system resulting in such waste, endemic disease and human health threats.

Caring About Animals

The average meat eater is responsible for the deaths of some 2,400 animals during his or her lifetime. Animals raised for food endure great suffering in their housing, transport, feeding and slaughter, which is something not clearly evident in the neatly wrapped packages of meat offered for sale at grocery counters. Given the information, many Americans—especially those with an environmental background—recoil at knowing they participate in a meat production system so oppressive to the animals caught up in it.

The family farm of the nineteenth century, with its "free-range" animals running around the farmyard or grazing in a pasture, is largely a thing of the past. Brutality to animals has become routine in today's factory farm. A recent article in the pig industry journal **National Hog Farmer** recommends reducing the average space per animal from eight to six square feet, concluding

"Crowding pigs pays." **Morley Safer** reported on the television program **60 Minutes** that today's factory pig is no "Babe": "[They] see no sun in their limited lives, with no hay to lie on, no mud to roll in. The sows live in tiny cages, so narrow they cannot even turn around. They live over metal grates, and their waste is pushed through slats beneath them and flushed into huge pits."

Beef cattle are luckier than factory pigs in that they have an average of 14 square feet in the overcrowded feedlots where they live out their lives. Common procedures for beef calves include branding, castration and dehorning. Veal calves, taken away from their mothers shortly after birth, live their entire lives in near darkness, chained by their necks and unable to move in any direction. They commonly suffer from anemia, diarrhea, pneumonia and lameness.

Virtually all chickens today are factory raised, with as many as six egg-laying hens living in a wire-floored "battery" cage the size of an album cover. As many as 100,000 birds can live in each "henhouse." Conditions are so psychologically taxing on the birds that they must be debeaked to prevent pecking injuries. Male chicks born on factory farms—as many as 280 million per year—are simply thrown into garbage bags to die because they're of no economic value as meat or eggs.

Some 95 percent of factory-raised animals are moved by truck, where they are typically subjected to overcrowding, severe weather, hunger and thirst. Many animals die of heat exhaustion or freezing during transport.

Some of the worst abuse occurs at the end of the animals' lives, as documented by **Gail Eisnitz**'s book, **Slaughterhouse**, which includes interviews with slaughterhouse workers. "On the farm where I work," reports one employee, "they drag the live ones who can't stand up anymore out of the crate. They put a metal snare around her ear or foot and drag her the full length of the building. These animals are just screaming in pain." He adds,

"The slaughtering part doesn't bother me. It's the way they're treated when they're alive." Dying animals unable to walk are tossed into the "downer pile," and many suffer agonies until, after one or two days, they are finally killed.

The threat to slaughterhouse workers' safety is largely underreported or ignored in the media. For example, **Mother Jones magazine**, in an otherwise admirable story on slaughterhouse workers, barely mentions the frequent injuries caused by pain-wracked animals lashing out inside the slaughterhouses. Despite the existence of the Humane Slaughter Act and regular USDA inspection, animals are often skinned alive or—in a major threat to worker safety—regain consciousness during slaughtering.

The Vegetarian Solution

Vegetarianism is not a new phenomenon. The ancient Greek philosopher **Pythagoras** was vegetarian, and until the mid-19th century, people who abstained from meat were known as "Pythagoreans." Famous followers of Pythagoras' diet included **Leonardo da Vinci, Benjamin Franklin, George Bernard Shaw and Albert Einstein**. The word "vegetarian" was coined in 1847 to give a name to what was then a tiny movement in England.

In the U.S., the 1971 publication of **Diet for a Small Planet** was a major catalyst for introducing people to a healthy vegetarian diet. Other stimuli included **Peter Singer's 1975 book Animal Liberation**, which gave vegetarianism a moral underpinning; **Singer and Jim Mason's book Animal Factories**, the first expose of confinement agriculture; and **John Robbins' 1987 Diet for a New America**.

In the U.S., according to a 1998 **Vegetarian Journal** survey, 82 percent of vegetarians are motivated by health concerns, 75 percent by ethics, the environment and/or animal rights, 31 percent because of taste and 26 percent because of economics.

Is the vegetarian diet healthy? The common perception persists that removing meat from the menu is dangerous because of protein loss. **Lappé** says there is danger of protein deficiency if vegetarian diets are heavily dependent upon 1) fruit; 2) sweet potatoes or cassava (a staple root crop for more than 500 million people in the tropics); or 3) the particular western problem, junk food.

But **Reed Mangels, nutrition advisor to the Vegetarian Resource Group (VRG)**, says vegetarians can meet their protein needs "easily" if they "eat a varied diet and consume enough calories to maintain their weight. It is not necessary to plan combinations of foods. A mixture of proteins throughout the day will provide enough "essential amino acids.""

Although meat is rich in protein, **Vegetarian and Vegan FAQ** reports that other good sources are potatoes, whole wheat bread, rice, broccoli, spinach, almonds, peas, chickpeas, peanut butter, tofu (soybean curd), soymilk, lentils and kale.

Supermarket shelves overflow with soy- or seitan-based meat substitutes. The soybean contains all eight essential amino acids and exceeds even meat in the amount of usable protein it can deliver to the human body. (It should be noted, however, that some people are allergic to soy, and the "hyper-processing" of some soy-based foods reduces the useful protein content.)

Animal rights advocates also claim that, contrary to the urging of the meat and dairy industries, humans need to consume only two to 10 percent of their total calories as protein.

How many vegetarians are there in the U.S.? It depends on whom you ask. A **PETA** fact sheet asserts that 12 million Americans are vegetarians, and 19,000 make the switch every week. **Pamela Rice, author of 101 Reasons Why I'm a Vegetarian**, puts the number at 4.5 million, or 2.5 percent of the population, based on recent surveys. Older counts, from 1992, put the number of people who "consider themselves" to be vegetarians at seven percent of the U.S. population, or an impressive 18 million. A 1991 Gallup Poll indicated that 20% of the population look for vegetarian menu items when they eat out.

Actual vegetarian numbers may be lower. **VRG** got virtually the same results in two separate Roper Polls it sponsored in 1994 and 1997: One percent of the public, or between two and three million, is vegetarian (eats no meat or fish, but may eat dairy and/or eggs), with a third to half of them living on a vegan diet (eschewing all animal products). Roughly five percent in both studies "never eat red meat." A 2000 poll was slightly more optimistic, putting the number of vegetarians at 2.5 percent of the population. Women are more likely to be vegetarians than men; and—surprisingly—Republicans are slightly more likely to abstain from meat than Democrats.

The **American Dietetic Association** says in a position statement, "Appropriately planned vegetarian diets are healthful, are nutritionally adequate and provide health benefits in the prevention and treatment of certain diseases." Vegetarians now have excellent opportunities to put together well-planned meals. The sale of organic products in natural food stores is the highest growth niche in the food industry, according to **Nutrition Business Journal**, and it grew 22 percent in 1999 to \$4 billion. The natural food markets of today are not the tiny storefronts of yesteryear, but full-service supermarkets, with vigorous competition among giant national chains. Diverse veggie entrees are now available in most supermarkets and on a growing list of restaurant menus.

It's never been easier to become a vegetarian, and there have never been more compelling reasons for environmentalists to make that choice. It's not always easy to do—most environmentalists still eat meat—but the tide is beginning to turn.

###

Source: <http://www.emagazine.com/archive/142>