

Saving the Planet, One Meal at a Time

BY JOHN CAMPBELL

The environment is becoming an increasingly important topic to many people today, but one extremely relevant factor is usually left out of environmental discussions. A process that kills over 45 billion animals each year, accelerates global warming, burns hundreds of millions of barrels of oil per year, and wastes millions of tons of food and water each day receives little attention in the environmental debate. It is factory farming — the industrialized, intensive, rapid production of all types of meat for human consumption. While the meat industry's treatment of animals has received increasing attention from media and government agencies, its vast environmental degradation goes largely unnoticed.

One of the most astonishing facts about factory farming is its inefficiency, as most animals consume an enormous amount of resources relative to their edible output. In 1981, *Newsweek* shined a spotlight on this issue, stating that the amount of water required to raise a 1,000-pound steer could "float a destroyer."¹ Officials within the U.S. beef industry have admitted that 792,000 gallons of water are needed to raise a 1,000-pound steer, and that may be a low estimate. Researchers at Michigan State University found that 2,500 gallons are needed to grow a pound of flesh, which



would mean the same steer actually necessitates 2.5 million gallons of water in its lifetime.² Contrarily, only 25 gallons of water are required to produce one pound of wheat, 1 percent as much water as is needed for beef.³

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Fresh water is becoming an increasingly limited resource. The World Bank reports that as many as 80 countries suffer from water shortages, affecting their economies, agriculture, and the health of their citizens.

This report says that 40 percent of the world's population has limited or no access to clean water. These numbers are continuing to rise, and one news report even went as far as to say that

water shortage may be the next cause of a world war.⁴

The waste of water is obviously significant to any environmental debate, but also to a larger ethical one, because depriving a person of a basic human need is one of the worst forms of violence. While most people consider violence to be direct and obvious physical harm, "structural violence" is

More serious than dry pancakes?

"Warmer winters caused by Global Warming are threatening the habitat of the maple tree, which does not thrive in milder conditions. Scientists estimate that the Northeast's average yearly temperature could rise by about 4-5 degrees over the next few decades. The warmer climate means that the maple tree - along with the rest of America's northeast forests will be more susceptible to disease, insects and drought. It's more serious than just dry pancakes. The loss of the maple trees would have a disastrous effect on New Hampshire's economy. Tourism would dry up along with syrup production. Thousands of jobs would be lost and a way of life would be gone forever." — StopGlobalWarming.org





Forests are often burned to make grazing land for cattle.

deprivation of basic human needs caused by corrupt social structures or institutions. Considering the huge waste of water caused by raising cattle and other animals, factory farming is clearly a source of structural violence. This injustice, however, can be fought individually on a day-to-day basis. A meat diet requires 4,000 gallons of water a day, while a vegetarian diet, on the other hand, requires only about 300 gallons of water a day.⁵ This is a difference of about 3,700 gallons — roughly the amount of water needed to keep 6,000 people healthy each day.⁶ Our food choices are clearly critical, as conversion to a more efficient diet helps to ensure that all humans have their essential needs met.

Factory farming also wastes food. It takes about 16 pounds of grain to produce one pound of beef, meaning that the amount of food that could feed 16 people instead goes to a sole individual.⁷ Surveys show that close to 70 percent (700 million acres) of all crops grown in the United States go to feeding animals that are raised for slaughter.⁸ Only about 6 percent of the land used to produce beef — 500 million acres (53 percent of U.S. farmland) — would be needed to feed the same number of vegetarians.⁹ Taking into account the inefficiency of all types of meat production, to feed all Americans

vegetables instead of meat would require at the most 12 percent of the 70 percent of land used to feed livestock.¹⁰ From this perspective, one could argue that more than half of all U.S. food crops are essentially wasted.

The misused resources do not stop here, as the process of growing all of these crops leads to the use of another dwindling commodity, oil. Growing crops, cultivating crops, transporting crops to be processed, processing, transportation to farms, transporting animals to slaughter houses, transporting meat, refrigeration, and distribution of meat all depend on petroleum. Cornell ecologist Dave Pimentel calculated that 284 gallons of oil are needed to raise a 1,250-pound cow for slaughter. The United States alone raises and slaughters over 25 million cows a year, meaning the total amount of oil used per year is more than 355 million barrels for cattle production and processing alone.¹¹ Considering the inefficiency of meat production, we are wasting oil. Fossil fuels are a source of environmental harm, global warming, and armed conflict.

Most people don't feel the air getting hotter with each bite of their Big Mac, but livestock are in fact responsible for 18 percent of greenhouse gas emissions, which is more than automobiles, according to the Food and Agriculture Organization of the United Nations. The hundreds of millions of cows raised worldwide each year produce immense amounts of the greenhouse gas methane, which warms the planet 20 times faster than carbon dioxide.¹² Deforestation, also a result of meat production, is responsible for 25 percent of atmospheric carbon dioxide.¹³ In the Amazon, 60 percent to 70 percent of deforestation is a result of livestock production.¹⁴ Conversely, plants, the basis of a vegetarian diet, remove carbon dioxide from the atmosphere, thus combating global warming. In addition to this, livestock are responsible for two thirds of all ammonia emissions, which directly contribute to acid rain — which pollutes water and harms aquatic animals, forests, and human health.¹⁵

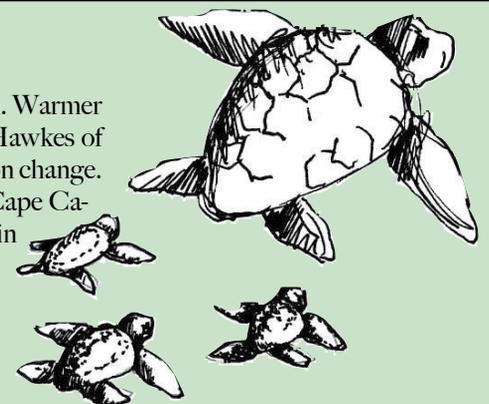
Any of us who have ever walked out in a pasture knows that farm animals produce astonishing amounts of excrement. At times, we must wonder, what happens to all of this waste?

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Gender Bender

“The sex of turtle hatchlings is determined by the temperature of eggs during incubation. Warmer nest temperatures produce females, and cooler nests result in males. According to Lucy Hawkes of the Marine Turtle Research Group at the University of Exeter (UK), these ratios could soon change. “With just two degrees Celsius of warming, there would be no more males produced at Cape Canaveral, Florida,” states Hawkes. It’s widely accepted that three degrees Celsius will occur in the next 100 years, which could be disastrous for Florida loggerheads”

— International Sea Turtle Society



VEGETARIANISM CONTINUED FROM P. 7

Pigs in North Carolina alone produce a staggering 19 million tons of waste a year, which is 5,000 pounds of waste per human citizen.¹⁶ Excrement becomes runoff during winter and flows into streams and rivers, and the effects are severe. Pollution in 71% of the rivers studied in Nebraska exceeded the standard for recreation, aquatic life, agriculture, and drinking supply, and this pollution can be traced back to the nearby pig farms.¹⁷ The farms on the Delmarva Peninsula in the eastern U.S. produce about 600 million chickens, but the University of Delaware calculated that the land can only naturally cope with the manure of 64 million chickens.¹⁸ The result has been that one-third of the underground aquifers used for drinking water have dangerously high nitrate levels, too high for human safety. In the Chesapeake Bay, the offal has caused an explosion of algal growth, creating "dead zones" that cannot support fish, crabs, oysters, or most other aquatic animals.¹⁹

Vegetarianism has been proven to be one of the most peaceful life practices. The base of Gandhian nonviolence is the Sanskrit term ahimsa, the lack of the desire to harm, which implies practice towards not only humans but all creatures. Factory farming, on the other hand, is one of the most cruel institutions known to humans, as billions of animals are inhumanely raised and slaughtered each year. Without going into much detail, this brutality includes: living spaces hardly larger than a pig's body, bolts injected into cows' brains, dumping of live chicks into dumpsters, geese living their entire lives with feed tubes forced down their throats, and more. As we work towards a more peaceful world for humans, we cannot accept this kind of inhumanity towards animals or any kind of beings. As Leonardo da Vinci has said, "As long as men massacre animals, they will kill each other. Indeed, he who sows the seeds of murder and pain cannot reap the joy of love."²⁰

While the drive to promote vegetarianism as an environmental solution may initially seem complex, it is an effort based simply on love. Whether it is love for animals, the Earth, or all human beings, eliminating or at least reducing factory farming would realize tremendous benefits. Many environmentalists have known that becoming a vegetarian would further their efforts but, to this point, may not have been motivated enough to act. Now, facing the bleak future of the environment, what more reason do they need?

John Campbell is a UC Berkeley student who likes eating at Cha-ya, a vegan Japanese restaurant.

Resources:

Go Veg: www.goveg.com
Vegetarian Resource Group: www.vrg.org
People for the Ethical Treatment of Animals: www.peta.org
The Way We Eat by Peter Singer and Jim Mason

References:

- ¹www.centerforfoodsafety.org ²www.askfarmerbrown.org/environ_destruction.htm
³www.duke.edu/web/planv/realities.html ⁴www.ecoearth.info
⁵www.goveg.com/environment-wastedResources-water.asp
⁶Based on info found on www.nutrition.about.com/od/hydrationwater/a/waterarticle.htm
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²⁰<http://www.veganoutreach.org/advocacy/quotes.html>