



## LESSON 24: "VEGANISM AND THE ENVIRONMENT"

One of the first books I read about veganism and vegetarianism was *Eating Animals* by Jonathan Safran Foer. Before reading it, I had no idea that there was a link between veganism and the environment at all. I was aware of global warming and environmental disasters, but I was pretty sure that the main cause for those were other factors like transportation and deforestation. In college, I had a professor who was known for being an environmentalist. He would frequently tell us about how he refused to get on airplanes or about all the different things you can do to help save the environment: take shorter showers, use your bike or walk, use public transportation instead of a car, turn off your electronic devices whenever you can, the list goes on and you've probably heard it all before. Once thing he never mentioned, however, was the link between meat and the environment. He advised us to eat local and organic meat, but he never told us to stop consuming it. When I found out that animal agriculture is in fact the number one cause for an endless list of environmental disasters, I started wondering. *How on earth did I not know about this?* I was a member of Green Peace, I bought organic food, I kept my showers short, I used my heater only when it was freezing, I made sure I turned off the lights whenever I left a room. And I ate meat, dairy and eggs every single day. So, where is the link? And why don't more people speak about it or speak up?



There is an excellent documentary called "Cowspiracy" that explains all of it in detail and if there is one documentary I would really urge you to see, it's this one. It's now available on Netflix and on [www.cowspiracy.com](http://www.cowspiracy.com) (available as DVD or digital download for a small fee). [Click here to read some facts about the link between animal agriculture and the environment.](#)

Here are just a few of them:

[For all the scientific sources, [click here](#)]

- Animal agriculture is responsible for 18 percent of greenhouse gas emissions, more than the combined exhaust from all transportation.
- Transportation exhaust is responsible for 13% of all greenhouse gas emissions.
- Greenhouse gas emissions from this sector primarily involve fossil fuels burned for road, rail, air, and marine transportation.
- Livestock and their byproducts account for at least 32,000 million tons of carbon dioxide (CO<sub>2</sub>) per year, or 51% of all worldwide greenhouse gas emissions.
- Methane is 25–100 times more destructive than CO<sub>2</sub> on a 20 year time frame.
- Methane has a global warming potential 86 times that of CO<sub>2</sub> on a 20 year time frame.
- Livestock is responsible for 65% of all human-related emissions of nitrous oxide – a greenhouse gas with 296 times the global warming potential of carbon dioxide, and which stays in the atmosphere for 150 years.
- Emissions for agriculture projected to increase 80% by 2050.
- Energy related emissions expected to increase 20% by 2040.
- US Methane emissions from livestock and natural gas are nearly equal.
- Cows produce 150 billion gallons of methane per day.
- 250–500 liters per cow per day, x 1.5 billion cows globally is 99 – 198.1 billion gallons. Rough average of 150 billion gallons CH<sub>4</sub> globally per day.
- Converting to wind and solar power will take 20+ years and roughly 43 trillion dollars.

- Even without fossil fuels, we will exceed our 565 gigatonnes CO<sub>2</sub>e limit by 2030, all from raising animals.
- Reducing methane emissions would create tangible benefits almost immediately.
- Fracking (hydraulic fracturing) water use ranges from 70–140 billion gallons annually.
- Animal agriculture water consumption ranges from 34–76 trillion gallons annually.
- Agriculture is responsible for 80–90% of US water consumption.
- Growing feed crops for livestock consumes 56% of water in the US. Californians use 1500 gallons of water per person per day. Close to Half is associated with meat and dairy products. 2,500 gallons of water are needed to produce 1 pound of beef. (NOTE. The amount of water used to produce 1lb. of beef vary greatly from 442 – 8000 gallons. We choose to use in the film the widely cited conservative number of 2500 gallons per pound of US beef from Dr. George Borgstrom, Chairman of Food Science and Human Nutrition Dept of College of Agriculture and Natural Resources, Michigan State University, "Impacts on Demand for and Quality of land and Water." )
- 477 gallons of water are required to produce 1lb. of eggs; almost 900 gallons of water are needed for 1lb. of cheese. 1,000 gallons of water are required to produce 1 gallon of milk.
- 5% of water consumed in the US is by private homes. 55% of water consumed in the US is for animal agriculture. Animal Agriculture is responsible for 20%–33% of all fresh water consumption in the world today.
- Livestock or livestock feed occupies 1/3 of the earth's ice-free land.
- Livestock covers 45% of the earth's total land.

- Animal agriculture is the leading cause of species extinction, ocean dead zones, water pollution, and habitat destruction.
- Animal agriculture contributes to species extinction in many ways. In addition to the monumental habitat destruction caused by clearing forests and converting land to grow feed crops and for animal grazing, predators and "competition" species are frequently targeted and hunted because of a perceived threat to livestock profits. The widespread use of pesticides, herbicides and chemical fertilizers used in the production of feed crops often interferes with the reproductive systems of animals and poison waterways. The overexploitation of wild species through commercial fishing, bushmeat trade as well as animal agriculture's impact on climate change, all contribute to global depletion of species and resources.
- Livestock operations on land have created more than 500 nitrogen flooded deadzones around the world in our oceans.
- Largest mass extinction in 65 million years.
- 2–5 acres of land are used per cow.
- Nearly half of the contiguous US is devoted to animal agriculture.
- The US lower 48 states represents 1.9 billion acres. Of that 1.9 billion acres: 778 million acres of private land are used for livestock grazing (forest grazing, pasture grazing, and crop grazing), 345 million acres for feed crops, 230 million acres of public land are used for grazing livestock.
- 1/3 of the planet is desertified, with livestock as the leading driver.
- Every minute, 7 million pounds of excrement are produced by animals raised for food in the US.
- This doesn't include the animals raised outside of USDA jurisdiction or in backyards, or the billions of fish raised in aquaculture settings in the US.

- A farm with 2,500 dairy cows produces the same amount of waste as a city of 411,000 people. 130 times more animal waste than human waste is produced in the US— 1.4 billion tons from the meat industry annually. 5 tons of animal waste is produced per person in the US.
- In the U.S. livestock produce 116,000 lbs of waste per second:
- Dairy Cows, 120lbs of waste per day x 9 million cows.
- Cattle, 63lbs of waste per day, x 90 million cattle.
- Pigs, 14lbs. of waste per day, x 67 million pigs.
- Sheep/Goats. 5lbs of waste per day, x 9 million sheep/goats.
- Poultry, .25–1lbs of waste per day, x 9 billion birds.
- Dairy cows and cattle—1.08 billion pounds per day (from 9 million dairy cows, 120 pounds waste per cow per day) + 5.67 billion pounds per day (90 million cattle, 63 pounds waste per one cattle per day) = 6.75 billion pounds per day waste or 2.464 trillion pounds waste per year (manure+urine)
- 3/4 of the world's fisheries are exploited or depleted.
- We could see fishless oceans by 2048.
- 90–100 million tons of fish are pulled from our oceans each year.
- As many as 2.7 trillion animals are pulled from the ocean each year.
- For every 1 pound of fish caught, up to 5 pounds of unintended marine species are caught and discarded as by-kill.
- As many as 40% (63 billion pounds) of fish caught globally every year are discarded.
- Scientists estimate as many as 650,000 whales, dolphins and seals are killed every year by fishing vessels.
- Animal agriculture is responsible for up to 91% of Amazon destruction.

- 1-2 acres of rainforest are cleared every second.
- The leading causes of rainforest destruction are livestock and feedcrops.
- Up to 137 plant, animal and insect species are lost every day due to rainforest destruction.
- 26 million rainforest acres (10.8m hectares) have been cleared for palm oil production.
- 136 million rainforest acres cleared for animal agriculture.
- 1,100 Land activists have been killed in Brazil in the past 20 years.
- Ten thousand years ago, 99% of biomass (i.e. zoomass) was wild animals. Today, humans and the animals that we raise as food make up 98% of the zoomass.
- 80% of antibiotic sold in the US are for livestock.
- 70 billion farmed animals are reared annually worldwide. More than 6 million animals are killed for food every hour.
- Throughout the world, humans drink 5.2 billion gallons of water and eat 21 billion pounds of food each day.
- Based on rough averages of 0.75 gallons of water and 3 lbs of food per day. water - 1/2 - 1 gallon
- Worldwide, cows drink 45 billion gallons of water and eat 135 billion pounds of food each day.
- Based on rough average of 30 gallons of water and 90 lbs of feed per day for 1.5 billion cows
- We are currently growing enough food to feed 10 billion people.
- Worldwide, at least 50% of grain is fed to livestock.
- 82% of starving children live in countries where food is fed to animals, and the animals are eaten by western countries.

- 15x more protein on any given area of land with plants, rather than animals.
- The average American consumes 209 pounds of meat per year.
- World Population grows 228,000+ people everyday.
- Land required to feed 1 person for 1 year: Vegan: 1/6th acre, Vegetarian: 3x as much as a vegan, Meat Eater: 18x as much as a vegan
- 1.5 acres can produce 37,000 pounds of plant-based food. 1.5 acres can produce 375 pounds of meat.
- A person who follows a vegan diet produces the equivalent of 50% less carbon dioxide, uses 1/11th oil, 1/13th water, and 1/18th land compared to a meat-lover for their food.
- Each day, a person who eats a vegan diet saves 1,100 gallons of water, 45 pounds of grain, 30 sq ft of forested land, 20 lbs CO2 equivalent, and one animal's life.

