



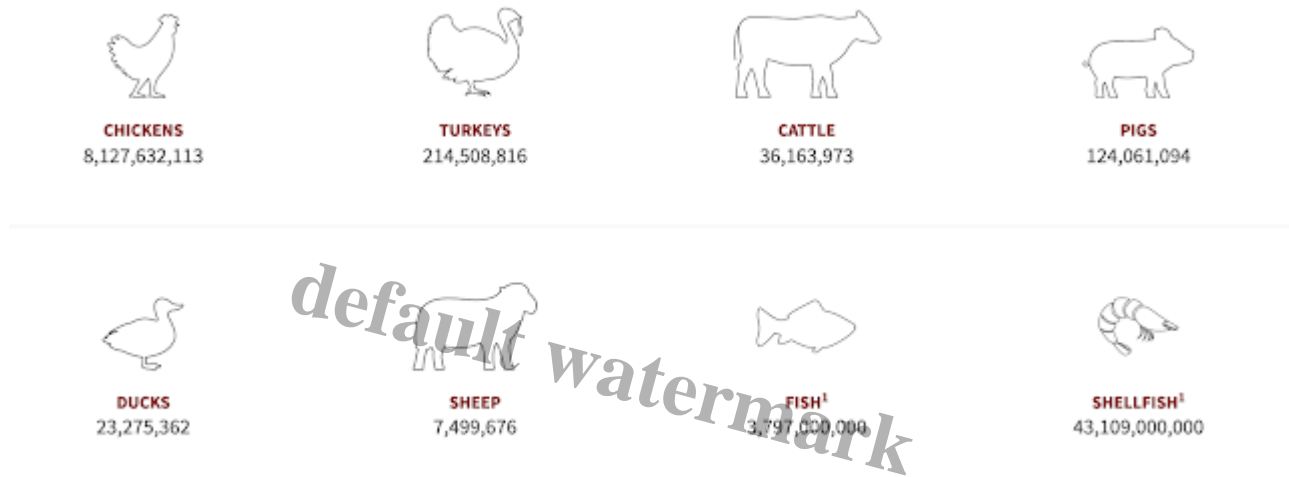
## Ignorance is No Longer an Option: The Large-Scale Meat Problem in America

### Description

Should humans eat animals? It's an important question that most Americans never consider. Raised in a culture that consumes animal products, we rarely wonder why and simply continue the traditions that came before us. And yet, in some religions and cultures, consuming a particular animal is forbidden. Jews and Muslims refrain from eating pigs. Hindus and some Buddhists do not eat any animals, and Jains are strict vegans. Even Christians, which includes many Americans, are encouraged to eat meat sparingly. They all have different reasons to refrain that are rooted in spirituality. However, more recently, vegetarianism has become more popular, not just for religious groups or those who abhor animal violence, but for people who care about the planet's future. And yet, surprisingly, when most Americans are asked what causes climate change, few will think of large-scale meat production. Pat Brown, a long-time Stanford biomedical researcher and founder of *Impossible Foods*, says "using animals in food production" is the "most environmentally destructive technology on earth" (qtd. in Dubner). In a world that is running out of resources quickly, the large-scale production of meat must be addressed. I believe education, finding alternatives, and implementing reasonable regulations are three critical aspects of reforming meat consumption. In this article, I will explain why large-scale meat production is harmful to the earth, discuss the need for education through literature and media, and introduce possible solutions to this problem.

Like many Americans, when I started learning about meat production in America, I did not understand its significance to global warming. I was ready to change my habits when it came to traveling, water consumption, energy consumption, and learning how to buy products with less waste. Yet, it did not occur to me that cutting my meat intake was just as important. According to Jason Lusk, professor and head of the agricultural economics department at Purdue University, America is the "king of meat-eaters. So, compared to almost any other country in the world, we eat more meat per capita" (qtd. in Dubner). An estimated 80 billion land animals are killed for consumption every year, according to the [World Animal Foundation](#) (2025), a rise from the estimated 50 billion, when I first wrote this article (according to 2023 statistics posted to the website *Animal Clock*, which uses USDA National Agricultural statistics to predict U.S. meat consumption). This means that every day, about 219 million animals are slaughtered in America to meet such high demands for meat.

Environmental author and podcaster Stephen Dubner estimates that, on average, every American individually consumes approximately 200 pounds of meat a year. There are so many animals in these facilities that they are left with more large-scale discharges and runoff or manure than they can handle (Lawley and Furtan 549). According to a study by Chad Lawley and Hartley Furtan published in the *Journal of Regional Science*, intensive livestock operations do not have sufficient land to effectively use the manure nutrients, resulting in waste being disposed of in local bodies of water. But water pollution isn't the only damage being done.



ANNUAL U.S. ANIMAL DEATH STATS Image from animalclock.org <https://animalclock.org/>

Meat production is especially harmful to the earth's atmosphere because of the methane and nitrous oxide produced by animals and their waste. According to British News Outlet *The Guardian*, the global production of food is responsible for a third of all planet-heating gases emitted by human activity, and nearly 60% of that is from meat production alone (Milman). An article in *Animal Frontiers* by Giampiero Grossi et al. explains why meat production is so harmful:

The most important greenhouse gases from animal agriculture are methane and nitrous oxide. Methane, mainly produced by enteric fermentation and manure storage, is a gas that has an effect on global warming 28 times higher than carbon dioxide. Nitrous oxide, arising from manure storage and the use of organic/inorganic fertilizers, is a molecule with a global warming potential 265 times higher than carbon dioxide. (Grossi et al. 69)

Because of the high volume of meat produced, especially beef, we emit large amounts of methane and nitrous oxide into the atmosphere that blanket the earth, causing it to rise in temperature slowly. If America continues to produce meat at its current rate, we cannot hope to slow down the catastrophic effects of global warming. Therefore, education is critical in changing the current demand for meat, especially beef, pork, and poultry.

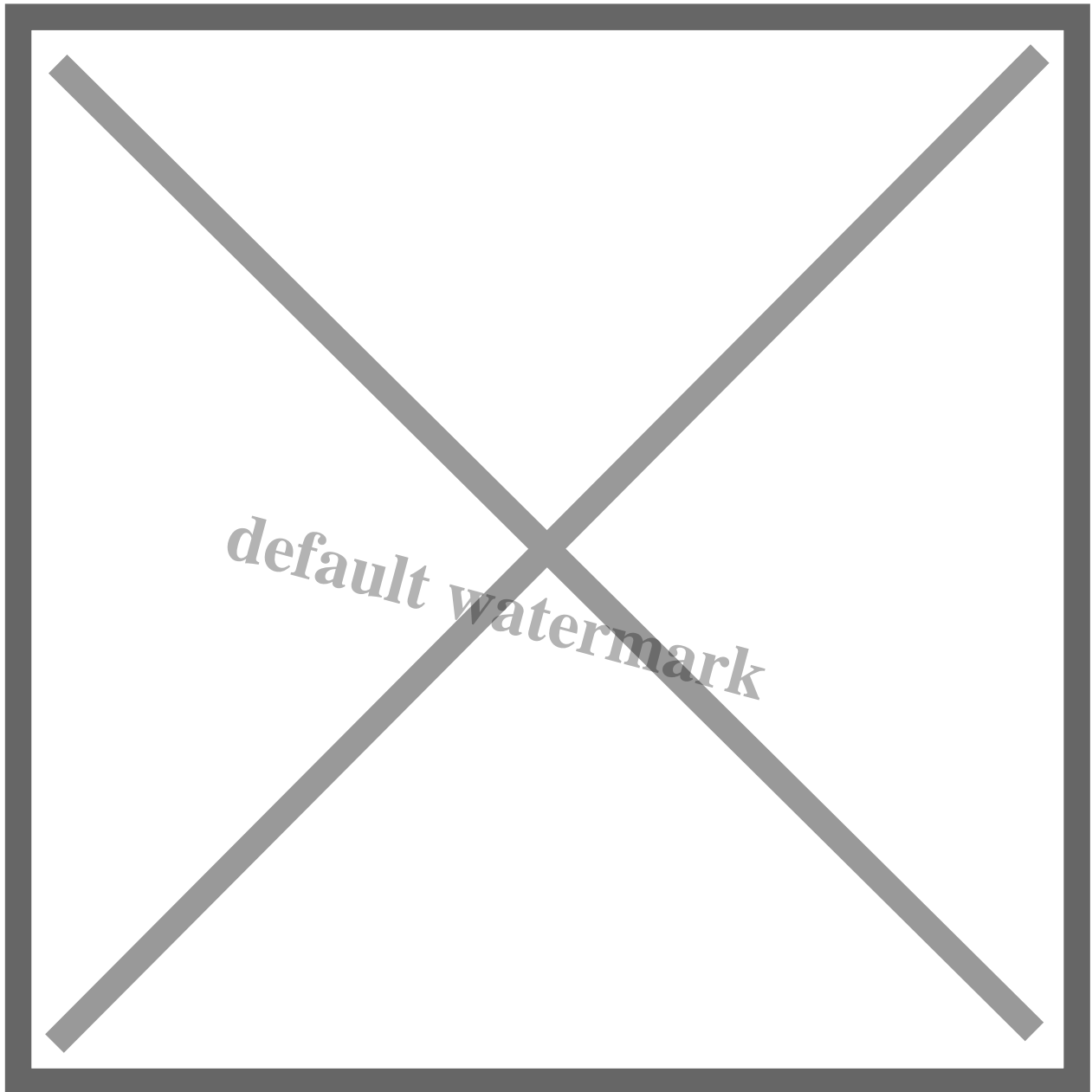
The 2017 documentary [Eating Animals](#), directed by Christopher Dillon Quinn, is an eye-opening and disturbing look into the meat industry. In it, we view the consequences of having no federal laws protecting or dictating animal treatment on farms and what happens when the majority of US

states expressly exempt farm animals or certain standard farming practices from their anti-cruelty provisions (Spain et al. 129). Large-scale meat production facilities are built with the express intent of reducing costs and producing competitively priced goods, but because there are no federal laws protecting animals raised for consumption, animals are often paying the price. This was confirmed when the documentary makers of *Eating Animals* tried to film current meat facilities across the nation. Farm owners refused to let cameras on their property and were hostile to anyone with a camera. What is going on inside those huge factories? Where are the animals? And why don't they want anyone to see what is going on? Spain et al. explain:

An increasingly urban population today has almost no access to farms and often lacks an understanding of the scale and common practices of modern facilities. This distance between consumers and farms and the primacy of efficiency has contributed to a shift in the meat, egg, and dairy industries from extensive, pasture-based, practices to efficiency-focused, intensive, and indoor-based systems. (128-29)

The treatment of animals in some facilities is so inhumane that corporations must hide it from the public if they hope to stay in business. Animals are treated like dead meat while they are still alive. In *Eating Animals*, we learn that few animals see the sun or have healthy diets, and many of them are so genetically altered that they no longer resemble the original animal we know: they are no longer even capable of having sex. They're all artificially inseminated (*Eating Animals*, 0:28:30). These are sick and diseased animals that live in filthy overcrowded conditions and need antibiotics because their bodies have been modified to grow four times more quickly than they would naturally (*Eating Animals*, 1:08:35). Animals raised for meat are so dependent on drugs that nearly 80% of all antibiotics produced by the pharmaceutical industry are used for factory-farm animals (*Eating Animals*, 1:08:35). Most people who consume antibiotic-dependent animals do so without realizing the full extent of unnatural intervention needed to produce such large amounts of meat so quickly, and they certainly do not consider how eating these drug-filled animals could affect them over time.

Since Americans usually do not see immediate repercussions from unhealthy diets of this nature, they are unlikely to suspect food as a culprit for most health issues. Yet, a 2009 study funded by the United States Department of Agriculture found that extensive antibiotic use in livestock raises concerns about increased pathogen resistance and related risks to human health (MacDonald and McBride 1). Recently, a woman in my graduate program and fellow environmental studies student told me of an experience she had with antibiotics in meat. Her husband, who is allergic to antibiotics, had a reaction and needed medical attention after consuming chicken from a meal-delivery service. Because she has learned about the dependence of meat facilities on antibiotics, she was able to figure out what happened and get the appropriate help, but otherwise, she and her husband would have had no clue what caused this reaction and how serious it was. Presented with a similar situation, I would guess most Americans would not come to the same conclusion because of how ill-informed the general public is about American meat practices. And so, the question is, why isn't this common knowledge? And how can we make this sort of knowledge mainstream? Most people are not going to seek out the scholarly articles referred to in this article. Many of them will not even watch a documentary about meat production, but a lot of people do read fiction and watch movies, so we need more material out there that addresses this topic in mainstream media and literature.



[My Year of Meats](#), by Ruth L. Ozeki, is an excellent example of popular fiction that approaches this topic and demonstrates how tragic meat consumption can be for humans. In the book, two characters—John and Jane—struggle with infertility because of possible exposure to a synthetic estrogen hormone once fed to cows, DES (Diethylstilbestrol). Jane finds out that DES is still illegally used by many cow farmers while filming a documentary about meat consumption in America. When she finally learns the extent of the problems in the meat industry, Jane says:

Of course I knew about toxicity in meat, the unwholesomeness of large-scale factor farming, the deforestation of the rain forests to make grazing land for hamburgers. Not a lot perhaps, but I knew a little. . . . I chose to ignore what I knew. . . . In this root sense, ignorance is an act of will, a choice that one makes over and over again, especially when information overwhelms and knowledge has become synonymous with impotence. (334)

Jane articulates the challenge we face in educating America about the dangers of the meat industry. Ignorance is embraced because, often, we are overwhelmed by the magnitude of the problem. No one wants global warming to worsen, and no one wants animals to be treated so poorly. But, if asked to stop eating so much meat or pay more for meat that is not produced in a large-scale meat production facility, most Americans will say, "I cannot afford to pay more," or "It makes no difference if one person or family gives up meat." Realistically, we need more than education to change the meat consumption of an entire nation: However, education is the first step.

Another troubling problem with meat consumption is its connection with heart disease and cancer. The documentary [Forks Over Knives](#), created by Brian Wendel, shows that modern-day Americans believe they must consume a lot more protein than is really necessary. This is probably due to the 1950s push from scientists and government leaders to consume milk and protein to combat world hunger (*Forks Over Knives*, 0:11:45). In the 1960s, heart disease was on the rise due to increased amounts of dietary cholesterol (only found in meat). By the 1970s, President Nixon took action on Americans' failing health with the Cancer Act of 1971, deemed a "War on Cancer" (*Forks Over Knives*, 0:17:35). As research and funding expanded, scientists like Dr. T. Collin Campbell and Dr. Caldwell Esselstyn discovered a connection between cancer and meat or dairy consumption. When comparing the causes of death in different countries, such as Papua New Guinea, China, Kenya, and Japan, they found that these countries had dramatically fewer deaths attributed to cancer and heart disease. Dr. Campbell and Dr. Esselstyn realized the common denominator was food: the diet of healthier countries was centered around plants, not meat. Around the same time, Dr. John McDougall moved to Hawaii and made similar findings when comparing the health of the older generations to younger generations: older generations ate mainly rice and vegetables, but their children and grandchildren adopted the American diet and began to have more health issues than their grandparents. But ill-informed nutrition ideas aren't just a problem of the past.

High protein diets, including the keto diet, have become popular in recent years because of their ability to help people lose weight quickly, but research shows that these types of diets are not healthy long-term, especially for patients with decreased kidney function. According to an article in the medical journal *Renal and Urology News*, "possible long-term risks of the keto diet include heart disease, cancer, diabetes, kidney stones, Alzheimer's disease, and other diseases" (Schieszer 15). People with kidney problems, including those with diabetes, should avoid the keto diet because it can do more harm to their already strained kidneys (Schieszer 15). Instead of a high protein diet, Dr. Neal Barnard says a "healthful diet of vegetables, fruits, whole grains, and legumes, appropriately planned will lead to healthier long-term weight control, in addition to helping preserve kidney function to the extent possible" (qtd in Schieszer 15). Nowadays, most Americans understand that eating a plant-based diet is healthy, but starches and gluten have become associated with weight gain, causing many to adopt a gluten-free or low-carbohydrate diet. Without those carbohydrates, they either have to eat more often or increase their proteins and fats to have sufficient energy to get them through the day. As a result, many are still skeptical about the benefits of cutting their meat intake, and for good reason, since they see quick results from high protein fad diets. However, the research is clear: consuming large amounts of animal products in the long term is not healthy.

Regardless of health, the truth is that meat is tasty and cheap. Until there are comparable alternatives, most Americans are not likely to make significant changes in their meat consumption. Lusk says, "[t]he basic problem is that people are not going to stop wanting these foods. And the only way we're going to solve it is not by asking them to meet you halfway and give them a substandard

product that doesn't deliver what they know they want from meat or fish or anything like that but by offering delicious and affordable alternatives (qtd in Dubner). However, private companies are making headway in this area; companies like Impossible Foods and Beyond Meat successfully make plant-based meat alternatives that claim to be comparable to meat in appearance, taste, and protein content, using genetic "plant engineering" (Dubner). Another option that has significant funding behind it (one investor is Bill Gates) is [Upside Foods](#), previously called Memphis Meats, which uses stem-cell research to produce "lab-grown meat" without animals (Demetrakakes). Upside Foods claims to have created the world's first lab-grown meatball in 2016 and the first lab-grown poultry in 2017, and they have plans to bring cell-cultured chicken product on the market this year (Demetrakakes). While the scalability of Upside Foods has less potential than plant-based meat, it may satisfy meat lovers in ways that a plant cannot, especially for consumers who are eager to support environmentally friendly meat production.

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## Image from Time Magazine â??Meat Without the Footprint: Good Meat Cultivated Chickenâ?•

Studies show that consumers care about the conditions in which animal-source foods (ASF) are raised, but without sufficient or trustworthy labeling, consumers are often left in the dark about individual companiesâ?? practices. In a 2018 survey conducted by Spain et al., â??(78%) [of respondents] reported being either somewhat or very concerned about the welfare of animals being raised for food,â?• and â??about two-thirds of consumers reported a willingness to pay extraâ?• for â??welfare-certified animal productsâ?• (132, 138). Current labeling practices of animal-source foods are determined by individual companies instead of third-party observers, which is problematic because companies can claim a product is â??natural,â?• has â??no added hormones,â?• or â??humaneâ?• without having to prove it. Spain et al. discovered that â??the current approval process for animal welfare claims leads to misleading labeling of meat, eggs, and dairyâ?• because terms like â??naturalâ?• and â??humaneâ?• are â??undefined by law and . . . therefore, entirely subjectiveâ?• (129). Additionally, a â??report by the Animal Welfare Institute showed that the USDA . . . often requires no substantiation of animal rearing claims and, when it does, the evidence farms must submit is inadequate and far below consumer expectation,â?• which ultimately lessens â??the demand for higher welfare products by offering consumers false securityâ?• in cheaper products (Spain et al. 129). If there is no label, or if a consumer cannot trust the labeling of the products they purchase, the most important factor in purchasing protein becomes the priceâ??and in most cases, the cheapest meat, eggs, and dairy products come from the most extensive facilities, big corporations like Perdue Farms Inc., Kroger Co., and Sanderson Farms, LLCâ??These companies have faced multiple lawsuits for false advertisements regarding meat quality (Spain et al. 130). A significant and necessary step to solving the meat crisis in America is creating and enforcing federal regulations that require animal-source foods to label where and how they are produced and whether hormones or antibiotics were used.

However, under the current policies controlled by individual state governments, the future of meat production in America is uncertain. Demand for meat is ever-increasing, but the resources to produce so much meat are limited, and at some point, we must acknowledge that our current methods are simply not sustainable. Unfortunately, the states primarily responsible for U.S. meat production (North Carolina, Alabama, South Dakota, Nebraska, Kansas, etcâ?i) are rural states that are economically dependent on meat production. According to Lawley and Furtan, the state legislature in these less populated states is often swayed â??to lower the environmental standards because profits are negatively affected by higher environmental standardsâ?• (551). Additionally, â??when the politicians decide on the level of environmental regulation,â?• they consider how pollution regulations affect the â??probability of reelectionâ?• (Lawley and Furtan 551-52). Unfortunately, even with sufficient education, change in the current system is unlikely, further supporting the need for federal regulations that hold animal source companies and state governments accountable for shady meat production practices.

America faces a real dilemma. Many are uneducated about the extent of harm that large meat facilities and high meat consumption can cause, and most of the small portion that is fully aware say this is a problem we cannot solve. In fact, after watching *Eating Animals*, I reached out to a few friends to tell them what I learned and implored them to watch it, too. Only one of them expressed interest, and that person has been a vegetarian in the past. One person said, â??I donâ??t want to watch it because Iâ??m afraid it will turn me into a vegetarian.â?• Many choose willful ignorance, but regardless of intent,

Ralph Waldo Emerson reminds us, “[y]ou have just dined, and however scrupulously the slaughterhouse is concealed in the graceful distance of miles, there is complicity.” And yet, despite our current circumstances, I am hopeful because literature and media exposing the truth are slowly becoming mainstream, and brilliant and capable individuals are dedicating their lives and livelihoods to this cause: Ethan Brown ([Beyond Meat](#)) and Pat Brown ([Impossible Foods](#)).

Access to environmentally sustainable meat alternatives is expanding every year. Impossible Food is served in about 30,000 American restaurants and more than 11,000 grocery stores in the US. Popular restaurants like Burger King, Red Robin, Carl’s Jr., Kentucky-Fried Chicken, Del Taco, White Castle, Taco Bell, and Quiznos are just some of the fast-food restaurants that offer plant-based meat products. With the combination of education, alternatives, and new legislation, I believe we can make a dent in America’s meat production problem. Does everyone need to become a vegan or vegetarian? No, but if Americans—who lead the world in global meat consumption—can find a way to eat less meat, even cutting it out for one or two days of the week, I think we could find a compromise that everyone can live with. Do your research and support small farms that take pride in meat quality and animal welfare. If we all put a little effort and consideration into how often we consume meat and where our animal source products come from, we can collectively influence change. Money often speaks louder than words in this industry, and if average Americans stop buying so much meat from large-scale facilities, things will change. After all, it is only a matter of time before the effects of climate change become so devastating that willful ignorance is no longer an option.

Discussion Question: What other ways can we encourage education of meat production in America?

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