

The End of Factory Farming: Alternatives to Improve Sustainability, Safety, and Health

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ABSTRACT

The UK-based campaign group Scrap Factory Farming has launched a legal challenge against industrial animal agriculture; the challenge is in the process of judicial review. While a fringe movement, Scrap Factory Farming has already accrued some serious backers, including the legal team of Michael Mansfield QC. The premise is that factory farming is a danger not just to animals or the environment but also to human health. According to its stated goals, governments should be given until 2025 to phase out industrialized “concentrated animal feeding organizations” (CAFOs) in favor of more sustainable and safer agriculture. This paper will discuss the bioethical issues involved in Scrap Factory Farming’s legal challenge and argue that an overhaul of factory farming is long overdue.

Keywords: Agriculture, Animal Ethics, Animal Rights, Climate, Factory Farming, Sustainability

INTRODUCTION

A CAFO is a subset of animal feeding operations that has a highly concentrated animal population. CAFOs house at least 1000 beef cows, 2500 pigs, or 125,000 chickens for at least 45 days a year. The animals are often confined in pens or cages to use minimal energy, allowing them to put on as much weight as possible in as short a time. The animals are killed early relative to their total lifespans because the return on investment (the amount of meat produced compared to animal feed) is a curve of diminishing returns. CAFOs’ primary goal is efficiency: fifty billion animals are “processed” in CAFOs every year.

The bioethical questions raised by CAFOs include whether it is acceptable to kill the animals, and if so, under what circumstances, whether the animals have rights, and what animal welfare standards should apply. While there are laws and standards in place, they tend to reflect the farm lobby and fail to consider broader animal ethics.

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Another critical issue applicable to industrial animal agriculture is the problem of the just distribution of scarce resources. There is a finite amount of food that the world can produce, which is, for the moment, approximately enough to go around.¹ The issue is how it goes around. Despite there being enough calories and nutrients on the planet to give all a comfortable life, these calories and nutrients are distributed such that there is excess and waste in much of the global North and rampant starvation and malnutrition in the global South. The problem of distribution can be solved in two ways: either by efficient and just distribution or by increasing net production (either increase productivity or decrease waste) so that even an inefficient and unjust distribution system will probably meet the minimum nutritional standards for all humans. This essay explores four bioethical fields (animal ethics, climate ethics, workers' rights, and just distribution) as they relate to current industrial agriculture and CAFOs.

I. Animal Ethics

Two central paradigms characterize animal ethics: welfarism and animal rights. These roughly correspond to the classical frameworks of utilitarianism and deontology. Welfarists² hold the common-sense position that animals must be treated well and respected as individuals but do not have inalienable rights in the same ways as humans. A typical welfare position might be, *"I believe that animals should be given the best life possible, but there is no inherent evil in using animals for food, so long as they are handled and killed humanely."* Animal rights theorists and activists, on the other hand, would say, *"I believe non-human animals should be given the best lives possible, but we should also respect certain rights of theirs analogous to human rights: they should never be killed for food, experimented upon, etc."*

Jeremy Bentham famously gave an early exposition of the animal rights case: *"The question is not Can they reason?, nor Can they talk?, but Can they suffer? Why should the law refuse its protection to any sensitive being?"*

Those who take an animal welfare stance have grounds to oppose the treatment of animals in CAFOs as opposed to more traditional grass-fed animal agriculture. CAFOs cannot respect the natural behaviors or needs of animals who evolved socially for millions of years in open plains. If more space was allowed per animal or more time for socialization and other positive experiences in the animal's life, the yield of the farm would drop. This is not commercially viable in a competitive industry like animal agriculture; thus, there is very little incentive for CAFOs to treat animals well. Rampant abuse is documented.³ Acts of cruelty are routine: pigs often have teeth pulled and tails docked because they often go mad in their conditions and attempt to cannibalize each other; chickens have their beaks clipped to avoid them pecking at each other, causing immense pain; cows and bulls have their horns burned off to avoid them damaging others (as this damages the final meat product, too); male chicks that hatch in the egg industry are ground up in a macerator, un-anaesthetized, in the first 24 hours of their life as they will not go on to lay eggs.

These practices vary widely among factory farms and among jurisdictions. Yet, arguably, the welfare of animals cannot be properly respected because all CAFOs fundamentally see animals as mere products-in-the-making instead of the complex, sentient, and emotional individuals science has repeatedly shown them to be.⁴

II. Climate Ethics

The climate impact of farming animals is increasingly evident. Around 15-20 percent of human-made emissions come from animal agriculture.⁵ and deforestation to create space for livestock grazing or growing crops to feed farm animals. An average quarter-pound hamburger uses up to six kilograms of feed, causes

66 square feet of deforestation, and uses up to 65 liters of water, with around 4kg of carbon emissions to boot – a majority of which come from the cattle themselves (as opposed to food processing or food miles).⁶ According to environmentalist George Monbiot, “Even if you shipped bananas six times around the planet, their impact would be lower than local beef and lamb.”⁷ The disparity between the impact of animal and plant-based produce is stark.

Not all animal products are created equally. Broadly, there are two ways to farm animals: extensive or intensive farming. Extensive animal farming might be considered a “traditional” way of farming: keeping animals in large fields, as naturally as possible, often rotating them between different areas to not overgraze any one pasture. However, its efficiency is much lower than intensive farming – the style CAFOs use. Intensive animal farming is arguably more environmentally efficient. That is, CAFOs produce more output per unit of natural resource input than extensive systems do. However, environmental efficiency is relative rather than absolute, as the level of intensive animal agriculture leads to large-scale deforestation to produce crops for factory-farmed animals. CAFOs are also point-sources of pollution from the massive quantities of animal waste produced – around 1,000,000 tons per day in the US alone, triple the amount of all human waste produced per day – which has significant negative impacts on human health in the surrounding areas.⁸

The environmental impacts of CAFOs must be given serious ethical consideration using new frameworks in climate ethics and bioethics. One example of a land ethic to guide thinking in this area is that “[it] is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.”⁹ It remains to be seen whether CAFOs can operate in a way that respects and preserves “integrity, stability, and beauty” of their local ecosystem, given the facts above. The pollution CAFOs emit affects the surrounding areas. Hog CAFOs are built disproportionately around predominantly minority communities in North Carolina where poverty rates are high.¹⁰ Animal waste carries heavy metals, infectious diseases, and antibiotic-resistant pathogens into nearby water sources and houses.

III. Workers’ Rights

The poor treatment of slaughterhouse workers has been documented in the US during the COVID-19 pandemic, where, despite outbreaks of coronavirus among workers, the White House ordered that they remain open to maintain the supply of meat. The staff of slaughterhouses in the US is almost exclusively people with low socioeconomic status, ethnic minorities, and migrants.¹¹ Almost half of frontline slaughterhouse workers are Hispanic, and a quarter is Black. Additionally, half are immigrants, and a quarter comes from families with limited English proficiency. An eighth live in poverty, with around 45 percent below 200 percent of the poverty line. Only one-in-forty has a college degree or more, while one-in-six lacks health insurance. Employee turnover rates are around 200 percent per year.¹²

Injuries are very common in the fast-moving conveyor belt environment with sharp knives, machinery, and a crowd of workers. OSHA found 17 cases of hospitalizations, two body part amputations per week, and loss of an eye every month in the American industrial meat industry. This is three times the workplace accident rate of the average American worker across all industries. Beef and pork workers are likely to suffer repetitive strain at seven times the rate of the rest of the population. One worker told the US Department of Agriculture (USDA) that “every co-worker I know has been injured at some point... I can attest that the line speeds are already too fast to keep up with. Please, I am asking you not to increase them anymore.”¹³

Slaughterhouses pose a major risk to public health from zoonotic disease transmission. 20 percent of slaughterhouse workers interviewed in Kenya admit to slaughtering sick animals, which greatly increases the risk of transmitting disease either to a worker further down the production line or a consumer at the supermarket.¹⁴

Moreover, due to poor hygienic conditions and high population density, animals in CAFOs are overfed antibiotics. Over two-thirds of all antibiotics globally are given to animals in agriculture, predicted to increase by 66 percent by 2030.¹⁵ The majority of these animals do not require antibiotics; they overuse creates a strong and consistent selection pressure on any present bacterial pathogens that leads to antibiotic resistance that could create devastating cross-species disease affecting even humans. The World Health Organization predicts that around 10 million humans per year could die of antibiotic-resistant diseases by 2050.¹⁶ Many of these antibiotics are also necessary for human medical interventions, so antibiotics in animals have a tremendous opportunity cost.

The final concern is that of zoonosis itself. A zoonotic disease is any disease that crosses the species boundary from animals to humans. According to the United Nations, 60 percent of all known infections and 75 percent of all emerging infections are zoonotic.¹⁷ Many potential zoonoses are harbored in wild animals (particularly when wild animals are hunted and sold in wet markets) because of the natural biodiversity. However, around a third of zoonoses originate in domesticated animals, which is a huge proportion given the relative lack of diversity of the animals we choose to eat. Q fever, or “query fever,” is an example of a slaughterhouse-borne disease. Q fever has a high fatality rate when untreated that decreases to “just” 2 percent with appropriate treatment.¹⁸ H1N1 (swine flu) and H5N1 (bird flu) are perhaps the most famous examples of zoonoses associated with factory farming.

IV. Unjust Distribution

The global distribution of food can cause suffering. According to research commissioned by the BBC, the average Ethiopian eats around seven kilograms of meat per year, and the average Rwandan eats eight.¹⁹ This is a factor of ten smaller than the average European, while the average American clocks in at around 115 kilograms of meat per year. In terms of calories, Eritreans average around 1600kcal per day while most Europeans ingest double that. Despite enough calories on the planet to sustain its population, 25,000 people worldwide starve to death each day, 40 percent of whom are children.

There are two ways to address the unjust distribution: efficient redistribution and greater net production, which are not mutually exclusive. Some argue that redistribution will lead to lower net productivity because it disincentivizes labor;²⁰ others argue that redistribution is necessary to respect human rights of survival and equality.²¹ Instead of arguing this point, I will focus on people’s food choices and their effect on both the efficiency and total yield of global agriculture, as these are usually less discussed.

Regardless of the metric used, animals always produce far fewer calories and nutrients (protein, iron, zinc, and all the others) than we feed them. This is true because of the conservation of mass. They cannot feasibly produce *more*, as they burn off and excrete much of what they ingest. The exact measurement of the loss varies based on the metric used. When compared to live weight, cows consume somewhere around ten times their weight. When it comes to actual edible weight, they consume up to 25 times more than we can get out of them. Cows are only around one percent efficient in terms of calorific production and four percent efficient in protein production. Poultry is more efficient, but we still lose half of all crops we put into them by weight and get out only a fifth of the protein and a tenth of the calories fed to them.²² Most other animals lie somewhere in the middle of these two in terms of efficiency, but no animal is ever as

efficient as eating plants before they are filtered through animals in terms of the nutritional value available to the world. Due to this inefficiency, it takes over 100 square meters to produce 1000 calories of beef or lamb compared to just 1.3 square meters to produce the same calories from tofu.²³

The food choices in the Western world, where we eat so much more meat than people eat elsewhere, are directly related to a reduction in the amount of food and nutrition in the rest of the world. The most influential theory of justice in recent times is John Rawls' *Original Position* wherein stakeholders in an idealized future society meet behind a "veil of ignorance" to negotiate policy, not knowing the role they will play in that society. There is an equal chance of each policymaker ending up poverty-stricken or incredibly privileged; therefore, each should negotiate to maximize the outcome of all citizens, especially those worst-off in society, known as the "maximin" strategy. In this hypothetical scenario, resource distribution would be devised to be as just as possible and should therefore sway away from animal consumption.

CONCLUSION

Evidence is growing that animals of all sorts, including fish and certain invertebrates, feel pain in ways that people are increasingly inclined to respect, though still, climate science is more developed and often inspires more public passion than animal rights do. Workers' rights and welfare in slaughterhouses have become mainstream topics of conversation because of the outbreaks of COVID-19 in such settings. Environmentalists note overconsumption in high-income countries, also shining a light on the starvation of much of the low-income population of the world.

At the intersection of these bioethical issues lies the modern CAFO, significantly contributing to animal suffering, climate change, poor working conditions conducive to disease, and unjust distribution of finite global resources (physical space and crops). It is certainly time to move away from the CAFO model of agriculture to at least a healthy mixture of extensive agriculture and alternative (non-animal) proteins.

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