CLIMATE CHANGE, MARGINALIZED COMMUNITIES, AND PANDEMICS: A NEW PARADIGM FOR TRANSFORMING INDUSTRIAL ANIMAL AGRICULTURE THROUGH ESG

BY

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Within the current legal landscape, this Article makes the "business case" for more environmentally and socially sustainable animal agriculture by large corporate entities. First, the Article details the negative externalities associated with industrialized animal farming operations, including high levels of greenhouse gas emissions as well as water and air pollution. The Article then highlights the significant human health issues related to industrial animal agriculture as well as how big animal agriculture contributes to structural racism, and subjects animals and farm workers—who are overwhelmingly marginalized persons of color—to misery on a daily basis. Next, the Article points out that industrial animal operations potentially lead to greater incidences of food borne illness, antibiotic resistance, and the development of other novel pathogens that could facilitate the next pandemic or even bio-terrorism.

Against the backdrop of these circumstances, the Article describes the federal government's failure to adequately regulate industrial animal farming facilities, including under the Clean Air and the Clean Water Acts — both of which provide expansive regulatory tools. Alongside these federal regulatory lapses, the Article discusses and analyzes California's Proposition 12 regarding humane animal housing and the recent US Supreme Court decision upholding Proposition 12, as well as other state laws on animal farming.

Ultimately, this Article proposes that our continued heavy reliance on these industrial "farm" operations, given the adverse impact they have on the environment, human health, and communities, does not make sense. The Article thus proposes a multi-faceted framework to address the adverse effects of industrial animal

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agriculture in the U.S., involving consumer pressure, media exposure, stricter federal regulation, and a massive corporate buy-in. The argument proceeds that there exist real social, environmental and even economic benefits for the U.S. economy to turn away from industrial animal farming as it exists today. To successfully accomplish this, corporate actors must recognize the" business case" for more humane and less intensive animal agriculture—albeit with the right to sell their products at a higher price.

I. INTRODUCTION

Over-crowded industrial farming operations—where farmers raise, confine, and slaughter large numbers of factory animals within small spaces—have negative consequences for the animals, workers, and the surrounding environment. At least one scholar has likened industrialized animal factory farming operations to some of the worst businesses in history, noting that like those in the opioid and cigarette industries, the sellers of factory farmed meat have not been honest with the public about the negative externalities associated with their products.[1] In the United States today, consolidation and heavy lobbying[2] have given a few large companies control of animal factory farming.[3] These companies continue to increase the concentration of power, resulting in increasingly favorable regulation.[4] Alongside this favorable regulatory environment, the concentration of power has also led to a growing lack of transparency as to the effects of industrial animal agriculture on the environment and public health.[5] In truth, industrial animal agriculture facilities have had a devastating effect on local air and water,[6] but also on global climate

1 *See* Randall S. Abate, *Anthropocene Accountability Litigation: Confronting Common Enemies to Promote a Just Transition*, 46 COLUM. J. ENV'T L. 225, 228–29, 271–72 (2021) (arguing for anthropocene accountability litigation against concentrated animal feeding operations ("CAFOs") similar to that waged against the cigarette and opioid industries).

2 Candice Wilson, *Too Big to Fail: How Consolidation in the Industrial Animal Agriculture Industry has Created Unintended Consequences that Threaten Farmers, Consumers, and Our National Security*, 28 DRAKE J. AGRIC. L 171, 187 (2023); Alex Lazar, *Industry Profile*: *Meat Processing & Products*, OPEN SECRETS (Sept. 2015), https://perma.cc/9Q7P-DV8F (noting that in 2020, the industry spent over four million dollars lobbying Congress).

3 *See, e.g.*, Tom Polansek, *Explainer: How Four Big Companies Control the U.S. Beef Industry*, REUTERS (June 17, 2021, 10:12 AM), https://perma.cc/UH9S-3EHJ (reporting that four companies—Cargill, Tyson Foods, JBS, and Marfrig Global Foods—comprise roughly 70% of U.S. beef production); Christopher Walljasper, *Large Animal Feeding Operation on the Rise,* INVESTIGATE MIDWEST (June 7, 2018), https://perma.cc/A356-DUCZ (reporting that, from 2011 to 2017, the number of CAFOs in the United States increased to 20,000, with Iowa leading the increases by state).

4 MARY K. HENDRICKSON ET AL., THE FOOD SYSTEM: CONCENTRATION AND ITS IMPACTS 10 (2020); *see* Sonci Kingery, Note, *The Agricultural Iron Curtain: Ag Gag Legislation and the Threat to Free Speech, Food Safety, and Animal Welfare*, 17 DRAKE J. AGRIC. L. 645, 647 (2012) (describing "Ag Gag" bills, designed to restrict documentation like photography and filming of livestock production facilities).

5 Danielle Diamond et al., *Agricultural Exceptionalism, Environmental Injustice and U.S. Right-to-Farm Laws*, 52 ENV'T L. REP. 10727, 10743 (2022) [hereinafter Diamond et al., *Agricultural Exceptionalism*].

6 *See generally* U.S. ENV'T PROT. AGENCY, EPA/600/R-04/042, RISK ASSESSMENT EVALUATION FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (2004) [hereinafter EPA, RISK ASSESSMENT] (detailing water pollution and air pollution concerns for CAFOs). The list of negative effects catalogued includes water pollution and air pollution, including from toxic volatile organic compounds, particulate matter, ammonia, and greenhouse gasses. *Id.* at 24, 63–66, 68–69. Other effects include metal contamination, release of endocrine disrupting chemicals, pathogens, and hormone contamination, among others. *Id.* at 28, 38, 42–43.

change and pollution.[7] Industrial animal farming operations produce massive amounts of runoff[8] that pollutes water, harming human health and the aquatic environment.[9] They also emit noxious fumes that impact communities,[10] generate voluminous greenhouse gas emissions, and require vast clearings of land.[11] Unsurprisingly, the worst of the effects are borne by those who work on or live nearby these operations or by those most likely to suffer the devastating and far reaching effects of global climate change.[12]

For factory workers in the United States who are employed by large industrial facilities known as Concentrated Animal Feeding Operations (CAFOs), where thousands of animals live in cramped and unnatural conditions,[13] the impact is particularly acute. In addition to daily exposure to air pollution,[14] the approximately 290,000 people who are employed in industrial animal agriculture[15] in the United States have little bargaining power, suffer a high level of accidents and poor working conditions,[16] and are at increased risk of developing antibiotic allergy or

7 H. Charles J. Godfray et al., *Meat Consumption, Health and the Environment*, 361 SCIENCE, Jul. 20, 2018, No. 243, at 4 (2018); *see* Abate, *supra* note 1, at 237–38 (noting that one dairy farm produces the waste of a city of over 400,000 people and that CAFOs emit carbon dioxide, methane, and nitrous oxide at an enormous rate estimated to account for at least 14% of all greenhouse gas emissions).

8 *See* discussion *infra* text accompanying notes 130–149.

9 Godfray et al., *supra* note 7, at 5.

10 *See* discussion *infra* text accompanying notes 185–191.

11 Godfray et al., *supra* note 7, at 4 fig.4(C), 247.

12 *See* Courtney G. Lee, *From Footnote to Forethought: Considering the Consequences of Large-Scale, Industrialized Animal Agriculture in Developing Nations*, 25 U.C. DAVIS J. INT'L L. & POL'Y 101, 122–24 (2019) (explaining how manure sprayed as fertilizer by CAFOs creates odors, pollution, and general inconveniences for neighboring homeowners and how close-quarters living conditions for animals increases their chance of disease, endangering the consumer). At COP28, one expert recognized that for the first time, there exists global acknowledgment that industrial agriculture has a significant effect on climate change. Somini Sengupta, *The Climate Summit Starts to Crack a Tough Nut: Emissions from Food*, N.Y. TIMES, https://perma.cc/FLY7-9CBY (Dec. 15, 2023) (stating that the food system accounts for approximately 30% of global greenhouse emissions and noting "broad acknowledgement that the food agenda is aligned with the climate fight").

13 *See Concentrated Animal Feeding Operations*, DEP'T OF ENV'T CONSERVATION, https://perma.cc/YPF8-WKJY (last visited Jan. 30, 2024) (New York State defines a "CAFO" as a feeding operation that meets certain animal size thresholds and confines those animals for more than 45 days in any 12-month period in an area in which vegetation does not grow). Similarly, the EPA defines and categorizes CAFOs depending on number of animals. *See* U.S. ENV'T PROT. AGENCY, REGULATORY DEFINITIONS OF LARGE CAFOS, MEDIUM CAFOS, AND SMALL CAFOS, https://perma.cc/VHL8-QA6W (last visited Feb. 11, 2024).

14 *See* JAMES MERCHANT & DAVID OSTERBERG, IOWA POL'Y PROJ., THE EXPLOSION OF CAFOS IN IOWA AND ITS IMPACT ON WATER QUALITY AND PUBLIC HEALTH 3–4 (2018) [hereinafter IOWA POLICY PROJECT] (detailing risks of chronic adverse health impacts realized through exposure to air surrounding CAFOs).

15 *Farm Labor*, U.S. DEPT. OF AGRIC. ECON. RSCH. SERV., https://www.ers.usda.gov/topics/farm-economy/farm-labor/#recent (last updated Aug. 7, 2023), (scroll to graph "U.S. Employment in Agriculture and Support Industries and click "chart data" for 2022 numbers).

16 Luca Greco, Note, *An Environmental Justice Analysis of the Exclusion of Farmworkers From the National Labor Relations Act*, 47 HARV. ENV'T. L. REV. 309, 319–23 (2023)

resistance.[17] The use of antibiotics on animals and the concomitant risk of untreatable human infection is particularly problematic.[18] On a global scale, animal factory farms also contribute to the development of additional and novel pathogens as over sixty percent of emerging infectious diseases are zoonoses.[19]

Given these myriad social and environmental sustainability concerns—including worker and community concerns, global climate change and pollution issues, and the ever-increasing potential for novel bacterial pathogens, as well as a new global pandemic[20]—this article asserts that the only way forward is via stricter regulatory efforts *paired* with media attention, consumer pressure, and *voluntary* corporate action. The moral imperative for corporations to "do the right thing" will not be sufficient. I thus make the argument in the following pages that only when corporations can see the "business case"[21] for doing the right thing regarding industrial animal farming, can we ward off the worst outcomes.

This piece asserts that federal regulatory efforts can hasten this necessary corporate buy-in, nudging corporate actors in a morally correct

("CAFOs pose a significant threat to the health of workers due to the animal waste generated through the process of raising livestock.").

17 *See id.* at 320 (describing CAFO worker exposure to allergens); Mary J. Gilchrist et al., *The Potential Role of Concentrated Animal Feeding Operations in Infectious Disease Epidemics and Antibiotic Resistance*, 115 ENV'T HEALTH PERSP. 313, 313 (2007), https://perma.cc/DQM4-CETR (reviewing the state of science on antibiotic resistance from CAFOs); *see also* Steven Wing et al., *Air Pollution and Odor in Communities Near Industrial Swine Operations*, 116 ENV'T HEALTH PERSP. 1362, 1362, 1366–67 (2008) [hereinafter Wing et al., *Air Pollution and Odor in Communities*] (studying the impacts of odor and air pollution from swine operations on health and other impacts of surrounding communities); Leah Schinasi et al., *Air Pollution, Lung Function and Physical Symptoms in Communities Near Concentrated Swine Feeding Operations*, 22 EPIDEMIOLOGY 208, 208, 214 (2011) [hereinafter Schinasi et al., *Concentrated Swine Feeding Operations*] (stating that working in or living near hog operations is associated with respiratory symptoms, reduced lung function, and organic dust toxic syndrome); Lee, *supra* note 12, at 118–19, 124 (stating that workers in factory farming operations are at great risk of illness, physical harm and death and describing how antibiotics used in factory farming are the primary contributors to antimicrobial resistance).

18 *Antibiotic Resistance and the Use of Antibiotics in Animal Agriculture: Hearing Before the Subcomm. on Health of the H. Comm. on Energy & Com.*, 111th Cong. 216, 218–19 (2010) (statement of Dr. Stuart B. Levy, President, Alliance for the Prudent Use of Antibiotics).

19 Kate E. Jones et al., Letter, *Global Trends in Emerging Infectious Diseases*, 451 NATURE 990, 990 (2008). Zoonotic pathogens, or zoonoses, are pathogens "which have a non-human animal source." *Id. See also* Zeynep Tufekci, *This May be Our Last Chance to Halt Bird Flu in Humans, and We are Blowing It,* N.Y. TIMES, https://perma.cc/5BL7-XTTU (Apr. 24, 2024) (noting that virus "spillovers from animals to humans are common").

20 *Experts Warn Concentrated Animal Feeding Operations (CAFOs) Could Lead to the Next Pandemic*, BEYOND PESTICIDES: DAILY NEWS BLOG (May 1, 2020), https://perma.cc/W4GT-L5ZP (relaying the warnings from scientists that CAFOs are "setting the table for the next pandemic").

21 The term "business case" for social sustainability efforts was suggested to this author at a presentation at Cornell Law School on June 10, 2023, by Cyrus Mehri in a talk entitled: "Justice, Equity, Diversity & Inclusion." *See* Cyrus Mehri & Michael L. Huyghue, Recorded Program at Cornell Law School Reunion Weekend 2023: Justice, Equity, Diversity, and Inclusion, at 12:23 (June 10, 2023), https://perma.cc/9Z5D-7TU5.

and environmentally sound direction as to industrial animal farming. Indeed, just recently, advocates came together to ask Congress to take action to protect farm laborers and food workers and to strengthen climate spending programs.[22] Newly introduced federal bills to curtail factory farming and rein in the worst practices as to workers and animals, while a start, would not take effect quickly enough to hasten effective action at large, industrial farming operations.[23]

Along with a regulatory tightening, the Article thus implores business to support—not counter—actions to improve conditions on CAFOs for people and the animals. Without synergistic corporate action and buy-in based on the "business case," large animal factory farms will continue to evade regulation, exacerbate climate change, and more firmly entrench concomitant environmental justice issues related to animal factory farms. For these reasons, efforts in Congress and elsewhere to shrink large, industrial agricultural operations and to further regulate their existing structures must move forward with corporate support. Corporations as social and capitalistic actors must voluntarily limit large animal farming operations and meaningfully advertise their good work to help educate the public. These actions may seem unreasonably utopian but must occur to allow large industrial farming corporations to make money and to prevent an existential crisis related to climate change, pollution, disease, and extreme human suffering. Indeed, experts contend that even if we mitigate greenhouse gas emissions in other sectors, we must reduce industrial food system emissions.[24] If we do not do so, the world will far exceed the two-degree Celsius temperature rise necessary to ward off the gravest effects of climate crisis.[25]

This argument proceeds in five parts. Part II of this paper details the miseries that animals suffer on CAFO's, as well as the effects of large industrial animal operations on workers, surrounding communities, and the larger environment. Part III discusses the specifics related to global water usage, pollution and climate change, and analyzes existing federal regulation of animal factory farms to potentially combat these adverse effects. Part IV discusses the environmental justice implications of industrialized animal farming operations. Part V analyzes recent

22 Press Release, Env't Working Grp., Advocates Urge House Farm Bill Leaders to Protect and Strengthen Anti-Hunger and Climate Spending Programs, Include Worker Protections (Aug. 3, 2023), https://perma.cc/R5XP-PAKN.

23 *See, e.g.*, Farm System Reform Bill of 2023, S. 271, 118th Cong. § 102 (2023) (as introduced in the Senate, Feb. 2, 2023) ("No large CAFO may continue to operate as a large CAFO after January 1, 2041."); *see also* Protecting America's Meatpackers Act of 2021, S. 3285, 117th Cong. § 2 (2021) (as introduced in the Senate, Nov. 30, 2021) (providing protections for meatpacking workers because meat and poultry workers suffer injuries at "measurably higher rates" than those workers in private sector industries); Industrial Agriculture Accountability Act of 2023, S. 272, 118th Cong. (2023) (as introduced in the Senate, Feb. 2, 2023) (creating the Office of High-Risk AFO Disaster Mitigation and Enforcement in the Department of Agriculture).

24 Peter H. Lehner & Nathan A. Rosenberg, *The Climate Crisis and Agriculture*, 52 ENV'T. L. REP. 10996, 10998 (2022).

25 *Id.*

attempts to strengthen federal regulation of large industrial farms and better protect workers and animals. Finally, Part VI puts forth the business case for more sustainable corporate action in the industrial animal farming industry. This section asserts that disparate state laws, media, consumer pressure, and stricter federal regulation can coalesce to create voluntary corporate action and necessary change. The argument acknowledges that factory farming involves not just animal suffering but also human rights, entitlements, and our shared obligations to all people, including the most disenfranchised members of our human world. However, only when corporations recognize the "business case" for more sustainable action and only when society fully sees the negative externalities of large scale animal agriculture—on the animals, workers, communities, and our planet—will we tackle the issue and act in a more environmentally and socially sustainable way.

II. HUMAN AND ANIMAL SUFFERING: EFFECTS OF THE LARGE FACTORY FARM

A. Animal Cruelty and Existing Conditions for Sentient Farm Animals

The over 1.6 billion factory farmed animals[26] in the United States do not live the bucolic life of pleasure and freedom depicted on egg cartons, butter wrappers, and other animal product packaging.[27] Factory farmed animals in over 25,000 U.S. facilities instead live in cramped, waste ridden conditions that do not allow for natural movement or behaviors.[28] These animals are commonly not even allowed to go outside and are forced to endure poor treatment and unnatural diets, as well as poor air and light quality in their housing.[29]

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26 FOOD & WATER WATCH, FACTORY FOOD NATION: 2020 EDITION (2020) [hereinafter FACTORY FOOD NATION], https://perma.cc/H9C7-Q9UR; *Factory Farming: What it is and Why It's a Problem*, THE HUMANE LEAGUE [hereinafter THE HUMANE LEAGUE], https://perma.cc/8PL4-PD4T (Nov. 10, 2022).

27 *See* Cole Mellino, *Ryan Gosling: What Costco Doesn't Want You to Know About Their Eggs*, ECOWATCH (June 26, 2015, 2:42 AM), https://perma.cc/C55D-FVUP (describing how the conditions at an egg supplier were "in stark contrast to the happy hens and green fields depicted on egg cartons"); *A Closer Look at Animals on Factory Farms*, ASPCA, https://perma.cc/7CSU-LHMC (archived Nov. 17, 2015) (describing the miserable conditions birds suffer on factory farms).

28 *See* FACTORY FOOD NATION, *supra* note 26, at 1–2 (discussing the inhumane levels of "extreme" and "severe" livestock density in factory farms in the United States); Marvi Ali, *Antibiotic Resistance and Ineffective Regulations for Factory Farming*, 10 WAKE FOREST J.L. & POL'Y 87, 87 (2019) ("These animals [in factory farming operations] lack proper food, space, ventilation, and hygiene, and are subjected to high stress."); *see also* David O. Wiebers & Valery L. Feigin, *What the COVID-19 Crisis Is Telling Humanity*, 54 NEUROEPIDEMIOLOGY 283, 284 (June 4, 2020) (discussing how the crowding of animals contributes to an increased exposure of diseases that may be detrimental to humans, including, likely, COVID-19 and SARS).

29 Andrea Prisco, *The Rise of Concentrated Animal Feeding Operations, Their Effects, and How We Can Stop Their Growth*, 126 DICK. L. REV. 883, 889 (2022).

In particular, pigs on factory farms face extreme miseries.[30] Piglets are routinely castrated without anesthesia:[31]a recent undercover video showed workers slitting the scrotum of piglets without anesthesia, and then ripping the testicles from the young animals as they screamed in pain.[32] Pigs also routinely have their teeth "clipped" and their tales "docked," or cut, to prevent fighting in the extremely crowded pen conditions—"aggressive behavior" that is not characteristic for the species under normal conditions.[33]

At one large facility in North Carolina, adult pigs stand in slatted pens, presumably so that their waste passes through the slats.[34] However, pigs miss the slats and waste winds up in the severely crowded pens and ultimately smeared on the animals themselves.[35] Pigs housed in this manner become so upset that they often die from the stress of the environment.[36] This treatment persists although, when raised in their natural environment, pigs are social and display attributes of high intellectual ability similar to that of a three-year-old human child.[37] Indeed, pigs are smart enough to sense danger when they arrive at the slaughterhouse, and do not move willingly toward slaughter.[38] Instead they may resist, as they are forcibly moved toward the slaughter point.[39]

Hens and veal calves also suffer cruel treatment on overcrowded factory farms. Farmers prematurely remove veal (male) calves from their

30 *See* Nicholas Kristof, Opinion, *The Truth About Your Bacon*, N.Y. TIMES (Aug. 5, 2023), https://perma.cc/6UPV-YKAN (describing "cruelty" observed on pig factory farms).

31 *Pig Castration*, TEX. TECH. UNIV. LAB. OF ANIMAL BEHAVIOR PHYSIOLOGY & WELFARE, https://perma.cc/2VDL-FNSR (last visited Jan. 24, 2024).

32 Kristof, *supra* note 30.

33 Rebecca Nordquist et al., *Mutilating Procedures, Management Practices, and Housing Conditions That May Affect the Welfare of Farm Animals: Implications for Welfare Research*, ANIMAL, Feb. 21, 2017, No. 12, at 3, 6 (describing how overcrowding in pig factory farms make violent encounters more common and explaining that teeth clipping allegedly prevents "severe injury during fights with pen mates" and tail docking is essentially a preventative measure done in "response to tail biting"); Prisco, *supra* note 28, at 889.

34 McKiver v. Murphy-Brown, L.L.C., 980 F.3d 937, 979 (4th Cir. 2020) (Wilkinson, J., concurring).

35 *Id.*

36 *See* ANIMAL LEGAL DEF. FUND, COVID-19 AND ANIMALS: RETHINKING OUR RELATIONSHIP WITH ANIMALS TO REDUCE THE LIKELIHOOD OF THE NEXT GLOBAL PANDEMIC 13 (2020), https://perma.cc/5F4L-XPHE (discussing how confinement at factory farms can cause severe stress in the animals).

37 *See* Lori Marino & Christina M. Colvin, *Thinking Pigs: A Comparative Review of Cognition, Emotion, and Personality in* Sus Domesticus, 28 INT'L J. COMP. PSYCHOLOGY 1, 9–10 (2015) (discussing the social complexities of pigs, which stems from their high intelligence); *Pigs: Intelligent Animals Suffering on Farms and in Slaughterhouses*, PETA [hereinafter *Pigs: Intelligent Animals*], https://perma.cc/N3SJ-MLAY (last visited Apr. 4, 2024) (discussing the intellectual sophistication of pigs).

38 Mick Smith, *The 'Ethical 'Space of the Abbattoir: On the (In)human(e) Slaughter of Other Animals*, 9 HUM. ECOLOGY REV., Winter 2002, at 49, 49; Shad Clark, *Slaughterhouses: How Are Animals Killed in a Slaughterhouse?*, HUMANE LEAGUE (Nov. 14, 2022), https://perma.cc/6J3R-FU78.

39 Clark, *supra* note 38.

mothers and often feed them a "grossly deficient and abnormal diet"[40] to keep their "desired" flesh white.[41] In most factory farms throughout the United States, veal calves are not permitted to move around, or even lie down.[42] Instead, many veal calves spend their brief lives—most are slaughtered before reaching twenty-four weeks of age—tethered or caged, unable to stretch, move, or lie comfortably.[43]

In the case of egg laying poultry, treatment also involves extreme confinement and miserable conditions. Since neither egg laying operations nor broiler chicken farms have use for male chicks, farmers dispose of the males soon after birth.[44] Methods of disposal "include maceration, or grinding; carbon monoxide poisoning; cervical dislocation, or manually dislocating the spinal column from the skull; and suffocation."[45] Female birds likely face a different but similarly cruel fate—a life spent in battery cages, unable to stretch their wings or move about freely.[46] Weakened birds may become trapped, unable to reach water or food, and die trapped inside the battery cages.[47] This poor treatment exists, again, in spite of the fact that birds are intelligent beings, capable of using higher level language, keeping themselves clean by dust bathing,[48] and "speaking" to and exhibiting leadership qualities among the flock.[49]

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40 Prisco, *supra* note 29, at 889.

41 *Facts on Veal Calves*, HUMANE SOC'Y VETERINARY MED. ASS'N, https://perma.cc/XCT5-87RD (last visited Jan. 24, 2024); *see also* P. Ne Neindre, *Evaluating Housing Systems for Veal Calves*, J. ANIMAL SCI., May 1993, at 1345 (discussing the fact that veal calves in intensive farms are housed in "tether stalls or in crates," impairing their ability to move or lie in a comfortable position).

42 *Facts on Veal Calves*, *supra* note 41.

43 *See id.*(discussing the strict confinement of veal calves); Prisco, *supra* note 29, at 889 (describing how farmers keep veal "in cages in which they can barely move").

44 *See* Sheila Rodriguez, *The Morally Informed Consumer: Examining Animal Welfare Claims on Egg Labels*, 30 TEMP. J. SCI. TECH. & ENV'T L. 51, 57 (2011) (explaining common methods of disposing of male chicks).

45 *Id.*; *see also Macerate*, MERRIAM-WEBSTER DICTIONARY, https://perma.cc/EY6K-6L6A (last visited Jan. 23, 2024) (defining macerate as "to cause to become soft or separated into constituent elements by or as if by steeping in fluid").

46 The typical battery cage allows for a hen to have the amount of space of a laptop computer, or 67 to 86 square inches. Valerie J. Watnick, *The Business and Ethics of Laying Hens*, 43 B.C. ENV'T AFF. L. REV. 45, 49 (2016) [hereinafter Watnick, *Laying Hens*]; *see also* Elizabeth R. Springsteen, *A Proposal to Regulate Farm Animal Confinement in the United States and an Overview of Current and Proposed Laws on the Subject*, 14 DRAKE J. AGRIC. L. 437, 453—54 (2009) (comparing state laws in Michigan and California related to the amount of space required in a hen enclosure).

47 Watnick, *Laying Hens*, *supra* note 46, at 50.

48 *See Chicken Dust Bath: The Ultimate Spa Treatment*, BRITISH HEN WELFARE TR. (Aug. 10, 2022), https://perma.cc/QR5G-JHDQ (explaining that dust bathing helps to keep parasites away and keep feathers from becoming oily).

49 Carolynn L. Smith & Sarah L. Zielinski, *Startling Intelligence of the Common Chicken*, SCI. AM. (May 1, 2017), https://perma.cc/TT6D-KG35.

Similarly, dairy cow farmers closely confine cows in milking stalls so that their udders are easily reached.[50] And although the bond between cow and their calf develops over time,[51] farmers often prematurely remove calves after just one to three days, leaving cows bellowing and howling for their young.[52] To add to this, soon after birthing calves, dairy cows are moved to "rape" racks where they are artificially inseminated to begin the process anew.[53] Once the dairy cow is no longer prolific, around age four years, she is sent to slaughter, well before the average life expectancy of a cow, which is normally closer to twenty years.[54]

Likewise, beef cows on factory farms often stand in their own feces and are fed corn, rather than grass, because corn is abundant and inexpensive,[55] despite evidence that ingesting grains is inconsistent with cows' evolved digestive mechanisms.[56] These inconsistencies can cause the production of harmful bacteria in the cattle's liver and digestive tract, making the animals extremely uncomfortable and increasing the risk of E. coli contamination for consumers.[57]

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50 *See* David M. Galton, *Dairy Herd Management*, *in* 1984 YEARBOOK OF AGRICULTURE: ANIMAL HEALTH LIVESTOCK AND PETS 112, 112 (Jack Hayes ed., 1989) (noting the use of tie-stalls for milking dairy cattle); *see also* Silvana Popescu et al., *Dairy Cows Welfare Quality in Tie-Stall Housing System With or Without Access to Exercise*, ACTA VETERINARIA SCANDINAVICA, June 1, 2013, No. 43, at 1–2 (describing the widespread use of tie-stall systems for dairy cows and its impact on cow welfare).

51 *See* Margret L. Wenker et al., *Effect of Cow-Calf Contact on Cow Motivation to Reunite with Their Calf*, SCI. REPS., Aug. 28, 2020, No. 14233, at 2 (showing that cows allowed to remain with and nurse calves over 5–8 days were more bonded to those calves).

52 *See* Danny Lewis, *New Way to Wean Calves Leaves Them Happier and Healthier*, SMITHSONIAN MAG. (Jan. 25, 2016), https://perma.cc/836F-DPEP (noting how dairy farms wean calves as soon as 24 hours after birth and how this "can often trigger abnormal behaviors in both cows, such as pacing, bellowing, and weight loss").

53 *See* Andrew Jacobs, *Is Dairy Farming Cruel to Cows?*, N.Y. TIMES (Dec. 29, 2020), https://perma.cc/6EL2-LJK2 (discussing common industry treatment of dairy cows, including how dairy "cows are repeatedly impregnated by artificial insemination"); *Is Your Food a Product of Rape?*, PETA, https://perma.cc/A79L-3NWM (last visited Jan. 28, 2024) (discussing the practice of artificially inseminating dairy cows and describing the equipment used as a "rape rack").

54 *See* Jacobs, *supra* note 53 (explaining that the life of the dairy cow would naturally be 20 years but dairy cows at factory farms are sent to slaughter after 4–5 years).

55 *See* Interview by Frontline with Michael Pollan, *in Frontline: Modern Meat* (PBS television broadcast April 18, 2002) https://perma.cc/48TD-HWDR (transcript).

56 Bonnie M. Ballard, Comment, *COVID and CAFOs: How a Federal Livestock Welfare Statute May Prevent the Next Pandemic*, 100 N.C. L. REV. 281, 286 (2021).

57 *See* Am. Ass'n for the Advancement of Sci., *Diet and Disease in Cattle: High-Grain Feed May Promote Illness and Harmful Bacteria*, SCI. DAILY (May 11, 2001), https://perma.cc/VAJ8-7SGN (discussing the harmful effects of a grain-based, fiber-deficient diet on cows); R. Jason Richards & Erica L. Richards, *Cheap Meat: How Factory Farming Is Harming Our Health, the Environment, and the Economy*, 4 KY. J. EQUINE, AGRIC. & NAT. RESOURCES L. 31, 47–48 (2011–2012) (explaining that undigested grains in a cow's stomach can result in growth of bacteria such as E-Coli); FOOD INC. (Magnolia Home Entertainment 2008) (examining the American food industry and discussing how high corn diets lead to E-coli growth in cows).

For many factory farm animals, the federal Humane Slaughter Act[58] at least requires that animals are rendered "insensible to pain" before being "shackled, hoisted, thrown, cast, or cut."[59] However, numerous failures have been reported such that animals are fully conscious and squealing as they are cut or shackled.[60] Worse still, factory farm workers have documented instances where cows that have not been sufficiently stunned and killed undergo partial dismemberment before death.[61]

The Humane Slaughter Act also does not apply to birds.[62] Yet, the industry kills over nine *billion* chickens annually in the United States.[63] Chickens typically arrive at the slaughterhouse and are then shackled upside down while fully conscious. Fast line speeds increase the chances that workers will inflict pain on the birds as they are hung upside down, such that they may enter the conveyer belt with broken bones or hanging in an improperly shackled manner.[64] Next, the birds have their throats cut: but live, unrestrained, or improperly shackled birds may wriggle past this mechanical treatment[65] and then head to the boiling water bath—

58 Humane Methods of Livestock Slaughter Act of 1978 (Humane Slaughter Act), 7 U.S.C. §§ 1901–1907 (2012).

59 *Id.* § 1902 (2018).

60 *See, e.g.*, Michelle Reynolds, *Pig Slaughter Gets Even More Cruel: USDA Cuts Speed Limits, Inspections*, PETA https://perma.cc/T29F-4KEC (Nov. 30, 2022) (noting 14 USDA "humane-slaughter violations" at a slaughterhouse, including animals "walking and squealing after being stunned" and animals being "fully conscious" immediately before being killed); *see also "Humane Meat" and "Free-Range Eggs" Do Not Exist: Help Stop Humane Washing*, PETA [hereinafter "*Humane Meat*", PETA], https://perma.cc/W5ZJ-SN9A (last visited Jan. 25, 2024) (reporting that some animals sent to slaughterhouses are "scalded to death while they're still conscious"); Press Release, Ctr. for Biological Diversity, USDA Inspector Describes Filth, Mistreatment at "Model" High-speed Slaughterhouse (Apr. 16, 2020), https://perma.cc/BF2D-DDR3 (describing "increased harm to hogs" likely to occur from rules deregulating slaughter, including hogs having "their throats slit and possibly even be[ing] boiled while fully conscious"); *Hormel: USDA-Approved High Speed Slaughter Hell*, ANIMAL OUTLOOK, https://perma.cc/5VTR-AM8Y (last visited Jan. 25, 2024) (describing scenes captured in a video taken inside a USDA-inspected slaughterhouse, including animals being "beaten, dragged, and improperly stunned"); *Amick Farms: High-Speed Chicken Slaughterhouse Exposed*, ANIMAL OUTLOOK, https://perma.cc/3MBP-JRTF (last visited Jan. 25, 2024) (noting that "many chickens [at slaughterhouses] may still be conscious when their throats are cut"); *End High-Speed Cruelty*, MERCY FOR ANIMALS, https://perma.cc/4DMJ-RW69 (last visited Jan. 25, 2024) (describing undercover footage showing chickens being shackled while fully conscious and having their throats slashed while still able to feel pain).

61 Jo Warrick, "*They Die Piece by Piece*", WASH. POST (Apr. 10, 2001), https://perma.cc/B8ZQ-HYQ5.

62 Humane Slaughter Act, 7 U.S.C. § 1902(a) (2018).

63 U.S. DEP'T OF AGRIC., POULTRY—PRODUCTION AND VALUE: 2022 SUMMARY (April 2023), https://perma.cc/Z2KC-CYK8.

64 *See* Jessica Chapman, Ingrid Seggerman, & Delcianna Winders, *Slaughterhouse Deregulation, A View of the Effects on Workers, Consumers and the Environment,* AM. BAR ASS'N, https://perma.cc/C9EL-Y7CW (last visited Jan. 26, 2024) (explaining that "the opportunity for things to go wrong increases as the speed of the conveyor line increases" and that chickens are "dumped out of a cage onto a conveyor belt" when they enter the slaughterhouse).

65 *Id.*

designed to remove feathers on dead birds—fully alive.[66] Birds that hit the water alive are scalded and drowned to death,[67] making their bodies unfit for human consumption.[68] Nearly 1,000,000 chickens die this way each year.[69] However, because the Human Slaughter Act does not cover birds,[70] there is no federal legal requirement to render them insensible to pain before slaughter[71] and, as a result, this scalding death is not prohibited. Treatment of factory farmed hens is so horrific that training for new processing plant inspectors includes "official" United States Department of Agriculture (USDA) instruction to look out for, among other things, factory employees squeezing or breaking legs of birds to fit them into the shackles, birds arriving at slaughter frozen in or to their cages, and birds arriving at slaughter displaying symptoms of heat stress.[72]

Additionally, documented instances of extreme cruelty on factory farms are widely available.[73] Examples include workers feeding the intestines of dead piglets to pregnant sows,[74] prodding animals unable to walk to slaughter,[75] tossing injured live birds on piles of dead animals,[76] and intentionally harming animals on industrial farms.[77] Sick or injured animals are denied veterinary care and animals may be tossed aside, even if visibly suffering.[78]

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66 *Id.*

67 *Id.*

68 *Id.* Controlled Atmospheric Stunning, whereby birds are humanely euthanized and then shackled, appears to be a more effective and more humane system for bird slaughter. *Controlled Atmosphere Stunning (CAS)*, LINDE, https://perma.cc/BK3H-7KFE (last visited Jan. 26, 2024).

69 Kimberly Kindy, *USDA Plan to Speed Up Poultry-Processing Lines Could Increase Risk of Bird Abuse*, WASH. POST (Oct. 29, 2013, 4:24 PM), https://perma.cc/27CG-XMXW; *See* ANIMAL WELFARE INST., THE WELFARE OF BIRDS AT SLAUGHTER IN THE UNITED STATES: THE NEED FOR GOVERNMENT REGULATION 3, 9–10 (3rd ed. 2020) (detailing numerous cases in which large numbers of chickens were sent into scalding water while still conscious) https://perma.cc/FN4L-NMM3.

70 *See* Humane Slaughter Act, 7 U.S.C. § 1902(a) (2018) (omitting poultry from the list of animals to which the act applies).

71 *See* FSIS Directive 6110.1, The Humane Handling Basics Training references Food Safety Inspection Service Guidelines for Handling of Poultry (U.S.D.A. 2018) [hereinafter FSIS Directive] (summarizing federal poultry slaughter requirements to only require that "breathing has stopped before scalding" and "slaughter results in thorough bleeding").

72 *Id.*

73 *See, e.g.*, Kenny Torrella, *A New Investigation Exposes the Stomach-churning Practice that Goes into Making Your Bacon*, VOX (Aug. 5, 2023, 2:20 PM), https://perma.cc/69GW-AV32 (documenting practices in the hog slaughter industry); Watnick, *Laying Hens*, *supra* note 46, at 70–71 (collecting documented instances of cruelty observed on factory farms).

74 Torrella, *supra* note 73.

75 *See* Andrew Martin, *Largest Recall of Ground Beef is Ordered*, N.Y. TIMES (Feb. 18, 2008), https://perma.cc/5VP5-DABB (describing a video showing "workers kicking sick cows" to "force them to walk").

76 ANIMAL WELFARE INST. THE WELFARE OF BIRDS AT SLAUGHTER IN THE UNITED STATES: 2017 UPDATE *2*, 7–10 (2017), https://perma.cc/C5KA-K8RA.

77 *See* "*Humane Meat"*, PETA, *supra* note 60 (reporting that an undercover investigator recorded farm "workers punching, throwing, and stomping on turkeys").

78 *Id.*

B. Effects on Workers in Large Scale Animal Operations

More than 290,000 people hold wage and salaried positions in agricultural production on industrial animal farming operations in the United States today.[79] Additionally, there were over 86,000 workers involved in slaughter and meat packing at 3,500[80] meat processing plants as of 2021.[81] The large scale and continued increase of animal factory farms in the United States is however a relatively new phenomenon.[82] Iowa, for example, the nation's top pork producing state, went from 722 CAFOs in 2001 to more than 10,000 such operations in 2017.[83] Paralleling this increase, demand for seasonal agricultural worker visas has risen dramatically in the last twenty years, from less than 40,000 to over 200,000 in 2019.[84]

Many plants are also vertically integrated such that the birthing and slaughter all occur under one roof.[85] In the factory farm plant, tightly crowded workers wield sharp tools to preside over the extremely cramped animals.[86] Accidents and injuries are widespread in these conditions.[87] According to a 2019 Human Rights Watch Report, meat-processing workers have some of the highest injury rates in the world.[88] Desire to

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79 *Farm Labor*, *supra* note 15.

80 *Industry in the United States: 31161: Animal Slaughtering and Processing*, U.S. CENSUS BUREAU, https://perma.cc/7ZN5-DT7C (last visited Jan. 29, 2024) (2021 Economic Surveys).

81 *Occupational Employment and Wages, May 2021: 51-3023 Slaughterers and Meat Packers*, U.S. BUREAU OF LAB. STATS., https://perma.cc/49A7-5QRY (last visited Jan. 23, 2024).

82 JAMES M. MACDONALD AND WILLIAM D. MCBRIDE, ECONOMIC RSCH. SERV., U.S. DEP'T OF AGRIC., THE TRANSFORMATION OF U.S. LIVESTOCK AGRICULTURE: SCALE, EFFICIENCY, AND RISKS 5 (2009), https://perma.cc/29DL-JGZH (finding that the production locus—the farm size at which one half of national production comes from larger farms and one half smaller—nearly doubled for cattle and broilers between 1987 and 2002); *see also* Christopher Walljasper, *Large Animal Feeding Operations on the Rise*, INVESTIGATE MIDWEST (June 7, 2018), https://perma.cc/6KNA-U6LR (reporting the number of CAFOs rose 7.6% between 2011 and 2017).

83 Alex Brown, *Environmentalists Make Long-Shot Attempt to Ban New Factory Farms*, STATELINE (Feb. 19, 2021, 12:00 AM), https://perma.cc/Q2SZ-9N83.

84 ANDORRA BRUNO, CONG. RSCH. SERV., R44849, H-2A AND H-2B TEMPORARY WORKER VISAS: POLICY AND RELATED ISSUES 4–5, 29 (2023).

85 *Vertical Integration*, NAT'L CHICKEN COUNCIL, https://perma.cc/FW3N-DMP2 (last visited Jan. 23, 2024).

86 *See* Kelly Dineen, *Meat Processing Workers and the COVID-19 Pandemic: The Subrogation of People, Public Health, and Ethics to Profits and a Path Forward*, 14 ST. LOUIS U. J. HEALTH L. & POL'Y 7, 17–18 (2020) (describing the "physically demanding" and dangerous work of the meat processing workers, including "standing all day in cold, crowded plants").

87 Andrew Wasley et al., *Two Amputations a Week: The Cost of Working in a US Meat Plant*, GUARDIAN (July 5, 2018), https://perma.cc/W83S-GLHB; *see* Dineen, *supra* note 86, at 17–18 (detailing the choices workers must make between health and a paycheck and widespread disenfranchisement).

88 MATT MCCONNELL, HUM. RIGHTS WATCH, "WHEN WE'RE DEAD AND BURIED, OUR BONES WILL KEEP HURTING": WORKERS 'RIGHTS UNDER THREAT IN U.S. MEAT AND POULTRY PLANTS 16 (Komala Ramachandra et al., Human Rights Watch, eds., 2019), https://perma.cc/EB9E-XEQW; *see also* James I. Pearce, *A Brave New Jungle: Factory*

increase profits demands increased line speeds, requiring workers to kill at an ever faster rate and exacerbating these effects.[89] Workers may also suffer from injuries caused by excessive noise on the job, highly repetitive movements, the animals themselves, or by machinery at the plant.[90] Workers must also breathe air laced with hazardous gasses and toxins.[91] On a daily basis, factory farm workers may face air containing high levels of ammonia and dust,[92] hydrogen sulfide, volatile organic compounds (VOCs), and inflammatory and infectious bioaerosols.[93] Under existing law, these negative health effects are likely to rise as the ratio of workers to animals decreases and factory farms continue to grow in size.[94]

The COVID-19 pandemic added an additional layer of health concerns to existing safety and job security concerns for factory farm and slaughterhouse workers.[95] In the face of the unknown disease, workers faced prolonged contact; fully indoor and crowded work situations; and lived in communities of diverse linguistic and cultural norms that presented challenges to pandemic safety measures.[96] Industrial animal processing workers consequently bore an uneven disease burden in the early months of the pandemic as the virus spread quickly through meat processing slaughterhouses.[97]

Farming and Advocacy in the Twenty-First Century, 21 DUKE ENV'T L. & POL'Y F. 433, 447–48 (2011) (documenting the dangers of working in meat processing plants and slaughterhouses).

89 Modernization of Swine Slaughter Inspection, 84 Fed. Reg. 52300 (Oct. 1, 2019) (codified at 9 C.F.R. pts. 301, 309, 310) (revoking maximum line speeds for hog slaughterhouses); *see also* U.S. Gov't Accountability Off., GAO-13-775, Food Safety: MORE DISCLOSURE AND DATA NEEDED TO CLARIFY IMPACT OF CHANGES TO POULTRY AND HOG INSPECTIONS (Aug. 2013), https://perma.cc/6ZKW-TU94 (admitting "weaknesses" in pilot projects using faster line speeds that "raise concerns about food safety and worker safety").

90 Emily Kolbe, "*Won't You be My Neighbor?" Living with Concentrated Animal Feeding Operations*, 99 IOWA L. REV. 415, 426–27 (2013); U.S. GOV'T ACCOUNTABILITY OFF., GAO-16-337, WORKPLACE SAFETY AND HEALTH: ADDITIONAL DATA NEEDED TO ADDRESS CONTINUED HAZARDS IN THE MEAT AND POULTRY INDUSTRY (2016); Tom Polansek & P.J. Huffstutter, *As U.S. Pork Plant Speeds Up Slaughtering, Workers Report More Injuries*, REUTERS (Feb. 19, 2021, 7:33 AM), https://perma.cc/8B69-9MMQ.

91 *Id.* at 426–27; *see also* Dineen, *supra* note 86 at 17 (describing the difficulty of social distancing and isolation in meat processing plants).

92 CARRIE HRIBAR, NAT'L ASS'N OF LOCAL BOARDS OF HEALTH, UNDERSTANDING CONCENTRATED ANIMAL FEEDING OPERATIONS AND THEIR IMPACT ON COMMUNITIES 5–6 (Mark Schultz ed. 2010), https://perma.cc/MG8C-PC73; *Animal Agriculture Workers*, FOOD EMPOWERMENT PROJ., https://perma.cc/K5GT-WCR9 (Jan. 2022).

93 Ji-Young Son et al., *Exposure to Concentrated Animal Feeding Operations (CAFOs) and Risk of Mortality in North Carolina, USA*, SCI. TOTAL ENV'T, Dec. 2021, No. 149407, at 1, 7–8.

94 Kolbe, *supra* note 90, at 426 ("CAFOs are continually growing in size and number while the number of workers in these facilities has decreased, leading to possibly dangerous ratios of workers to animals.").

95 Jocelyn J. Herstein et al., *Characteristics of SARS-CoV-2 Transmission Among Meat Processing Workers in Nebraska, USA, and Effectiveness of Risk Mitigation Measures*, 27 EMERG. INFECT. DIS. 1032, 1034 (April 2021).

96 *Id.* at 1032.

97 *Id.*

To complicate matters, farm workers are often immigrants who lack the ability to organize or access mental or physical health services and therefore must often suffer health consequences without full support.[98] Workers in big agriculture also often fear immigration persecution, have food insecurity, and feel disempowered in interactions with superiors.[99] In fact, in the 49 counties where meatpacking and processing is most prevalent, a US Department of Agriculture survey identified 34.7 percent of these counties as high poverty areas.[100] Especially during the pandemic, widespread illness in largely racially or ethically minority populations[101] exacerbated an already dire situation for workers who may not speak English or have choice of occupation.[102]

Adding to the unevenly borne physical health effects of working in industrial animal agriculture, expert research shows that farmed animals are not alone in experiencing mental trauma from the industrial, overcrowded animal farming operations. Workers who witness daily cruelty suffer psychological trauma.[103] Many workers disassociate and subconsciously begin to view the animals as production items[104] rather than as sentient beings in need of compassion. Slaughterhouse workers thus suffer high rates of depression, anxiety, and other psychopathologies.[105] Additionally, animal farm workers have been known to become immune to the suffering of the animals and actually lash out at animals in their care.[106] More so, workers may become

98 Greco, *supra* note 16, at 322–23 (noting that workers may suffer from inability to deal with complicated problems such as visas, immigration status, inability to organize due to educational, and language and cultural barriers).

99 Sonia Weil, *Big-Ag Exceptionalism: Ending the Special Protection of the Agricultural Industry*, 10 DREXEL L. REV. 183, 194 (2017); Dineen *supra* note 86, at 13.

100 U.S. Dep't of Ag., Econ. Rsch. Serv. *The Meatpacking Industry: Rural America During the Covid-19 Pandemic*, U.S. DEP'T OF AG., https://perma.cc/8E7G-HS9U (May 13, 2021); Shawn D. Ren, Comment, *Protecting Our At-Risk Communities From the Ground(Water) Up: CAFOs, the Clean Water Act, and a Framework for Offering Clarity to an Imprecise* Maui *Test*, 71 EMORY L.J. 563, 566 (2022) (noting that industrial animal farming operations are "disproportionately situated in regions populated by minority, indigent and uneducated groups" (internal citations omitted)).

101 *See* Michelle A. Waltenburg et al., *Update: COVID-19 Among Workers in Meat and Poultry Processing Facilities—United States, April–May 2020*, 69 MORBIDITY & MORALITY WKLY. REP. 887, 889 (June 2020) (reporting rates of COVID-19 infection in April and May 2020 among meat processing workers at nearly 17,000 with 86 deaths).

102 Shawn Fremstad, Hye Jin Rho, & Hayley Brown, *Meatpacking Workers are a Diverse Group Who Need Better Protections*, CTR. FOR ECON. & POL'Y RSCH. (Apr. 29, 2020), https://perma.cc/965C-T7EG; Dineen *supra* note 86, at 13.

103 Jessica Slade & Emma Alleyne, *The Psychological Impact of Slaughterhouse Employment: A Systematic Literature Review*, 24 TRAUMA VIOLENCE ABUSE 429, 430 (2021), https://perma.cc/3RTB-WDUC.

104 *See* Jennifer Dillard, *A Slaughterhouse Nightmare: Psychological Harm Suffered by Slaughterhouse Employees and the Possibility of Redress through Legal Reform*, 15 J. GEO. J. ON POVERTY L. & POL'Y 391, 398 (2008) (discussing how workers "double" their personalities to suppress their empathy).

105 *Id.* at 397.

106 *See, e.g.*, Associated Press, *Undercover Video Shows Shocking Cow Abuse*, N.Y. POST (Nov. 10, 2017), https://perma.cc/C5P2-PU3H/ (describing a video taken at a U.S. dairy

hardened to violence in general, and engage in interpersonal violence or crime in the human community.[107]

C. Community Health and Safety: Antibiotic Resistance Related to Extreme Crowding and the Potential for Disease

In addition to direct harm to workers, factory farms negatively affect public health by increasing the potential for antibiotic resistance and emerging new pathogens.[108] In a prescient 2018 handbook, the World Health Organization (WHO) noted that over 70% of all pathogens come from animals: "[w]hether transmitted by mosquitoes, other insects, contact with animals or person-to-person, the only major uncertainty is when [a new pandemic], or something equally lethal, will arrive."[109] Pathogens from animals thus present a "burgeoning threat, because animals are intensively farmed, transported for trade and kept in close contact with other species and humans in market places."[110]

WHO also importantly noted that the twenty-first century brought with it increased globalization, migration, and transportation between cities that has set the stage for faster and broader pathogen transmission.[111] In this way, closely confined and transported factory farmed animals in the United States present grave pathogenic risks to both the humans who work with them and the broader global society.[112]

Additionally, industrial farmers prophylactically dose factory farmed animals with antibiotics to reduce the spread of bacterial infection and promote growth.[113] Experts have linked this use of antibiotics to the emergence of antibiotic-resistant microbes that animals can pass to

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farm); *Undercover Video Shows "Sadistic" Chicken Abuse on B.C. Farms: Animal Rights Group*, CTV NEWS (June 12, 2017), https://perma.cc/KNV5-9YMR (describing footage depicting reported abuses towards poultry by humans at a Canadian facility).

107 The data on the relationship between slaughterhouse work and crime or violence, including interpersonal violence, are conflicting. *See* Slade & Alleyne, *supra* note 103, at 436 (describing statistical studies linking crimes to slaughterhouse employment).

108 WORLD HEALTH ORG., MANAGING PANDEMICS 19, 25 (2018), https://perma.cc/479U-6K8K. Seventy percent of all new pathogens emerge from animals. *Id.*

109 *Id.* at 14.

110 *Id.* at 19.

111 *See* Michael Greger, *The Long Haul: Risks Associated with Livestock Transport*, 5 BIOSECURITY & BIOTERRORISM 301, 301 (2007) (noting that, as industry continues to segment the steps in animal farming, animals are moved over greater areas of the U.S., and have a greater ability to spread disease that develops in a herd).

112 *Id.* at 303.

113 Claas Kirchhelle, *Pharming Animals: A Global History of Antibiotics in Food Production (1935–2017)*, 5 PALGRAVE COMMS., Aug. 2018, No. 96 (2018), https://perma.cc/V4C8-NY6Q; U.S. GOV'T ACCOUNTABILITY OFF., GAO-04-490, ANTIBIOTIC RESISTANCE: FEDERAL AGENCIES NEED TO BETTER FOCUS EFFORTS TO ADDRESS RISK TO HUMANS FROM ANTIBIOTIC USE IN ANIMALS 10 (2004) [hereinafter GAO, ANTIBIOTIC RESISTANCE]; *see* PEW COMM'N ON INDUS. FARM ANIMAL PROD., PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 6, 15, https://perma.cc/F52U-GJHL (describing the use of antibiotics in animal agriculture).

humans.[114] When testifying before Congress, Dr. Stuart Levy, Professor of Medicine, Microbiology, and Molecular Biology at Tufts University, noted the rapid development of antibiotic resistant strains of bacteria in farm animals given "non-therapeutic" (often called sub-therapeutic) antibiotics in their feed.[115] Importantly, the commonly used terminology "sub-therapeutic" or "non-therapeutic" belies the real meaning for such antibiotics, as they are not really "therapeutic" at all.[116] Rather, sub-therapeutic antibiotic use refers to the practice of including antibiotics in animal feed as a provisional, prospective measure.[117] Thus, factory farmed animals receive antibiotics to promote their growth[118] and to ward off disease caused by living closely packed together—not to treat any current condition.[119]

Widespread antibiotic exposure has thus spawned antibiotic resistance directly in factory farm workers.[120] In some instances, such resistance has led to human "superbugs" that are not treatable with existing antibiotics.[121] This has raised alarm in medical and scientific communities, who fear that we will soon live in a "post-antibiotic" world where antibiotics will not treat human infections effectively.[122]

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114 GAO, ANTIBIOTIC RESISTANCE, *supra* note 113; *see* PEW COMM'N ON INDUS. FARM ANIMAL PROD., *supra* note 113, at 11–13 (discussing increased health concerns from antibiotic use, including antibiotic resistance).

115 *Antibiotic Resistance and the Use of Antibiotics in Animal Agriculture: Hearing Before the Subcomm. on Health of the H. Comm. on Energy & Com.*, 111th Cong. 216 (statement of Dr. Stuart B. Levy, President, Alliance for the Prudent Use of Antibiotics); *see also* Press Release, Johns Hopkins Bloomberg Sch. of Pub. Health, New USDA-Certified Standard on Antibiotics Limits Some, but Not All Sub-therapeutic Antibiotic Use in Poultry (May 7, 2015), https://perma.cc/4V2T-JK45.

116 *See Therapeutic*, MERRIAM-WEBSTER, https://perma.cc/SW8Y-PZLK (archived Oct. 2, 2015) (defining therapeutic as "of or relating to the treatment of disease or disorders by remedial agents or methods" or "providing or assisting in a cure").

117 Aude Teillant & Ramanan Laxminarayan, *Economics of Antibiotics Use in U.S. Swine and Poultry Production*, CHOICES, 1st Quarter 2015, at 1, https://perma.cc/C6GF-CGJJ (identifying sub-therapeutic antibiotics as those used primarily to hasten growth and prevent disease).

118 Godfray et al., *supra* note 7, at 4.

119 Sudeshna Ghosh & Timothy M LaPara, *The Effects of Subtherapeutic Antibiotic Use in Farm Animals on the Proliferation and Persistence of Antibiotic Resistance Among Soil Bacteria*, 1 INT'L SOC'Y FOR MICROBIAL ECOLOGY J. 191, 191 (2007); *see also* David DeGrazia, *Moral Vegetarianism from a Very Broad Basis*, 6 J. MORAL PHIL. 143, 152 (2009) (noting that factory farm calves never receive disease-fighting mother's milk, and commonly live in a "in a very crowded dry lot devoid of grass").

120 *Antibiotic Resistance and the Use of Antibiotics in Animal Agriculture: Hearing Before the Subcomm. on Health of the H. Comm. on Energy & Com.*, 111th Cong. 216, 218–19 (2010) (statement of Dr. Stuart B. Levy, President, Alliance for the Prudent Use of Antibiotics).

121 *See id.* at 219 (describing "uncontained" antibiotic-resistant bacteria on farms); *Factory Farms: Hell for Hens*, STOP FACTORY FARMS, https://perma.cc/PY9H-NKNM (archived Oct. 2, 2015) (describing antibiotic-resistant bacteria as "superbugs").

122 *See Antibiotic Resistance and the Use of Antibiotics in Animal Agriculture: Hearing Before the Subcomm. on Health of the H. Comm. on Energy & Com.*, 111th Cong. 26, 30–31 (2010) (statement of Thomas Frieden, Director, Centers for Disease Control and Prevention) ("When no antibiotic is effective, healthcare providers may be limited to providing supportive care rather than directly treating an infection—similar to how medicine was practiced

In response to this dire threat, the European Union (EU) has phased out the "sub-therapeutic" agricultural use of antibiotics; Johns Hopkins University and the American Medical Association, among other national health organizations, have urged the United States to follow suit.[123] In this sense, increasing the space to which farm animals are confined may concomitantly reduce the need for consistent use of prophylactic "sub-therapeutic" antibiotics in farm animals. Improving available space and sanitation at factory farms could in turn also reduce the *therapeutic* need for antibiotic treatment and thus the likelihood that novel pathogens will develop.[124] Furthermore, extreme crowding inevitably leads to heavy production of waste.[125] This, coupled with facilities that are frequently understaffed, means the waste is allowed to build up and attract vectors of disease such as fly swarms.[126] Sanitary housing with more room and thorough cleaning[127] could thus reduce the development of animal disease and potentially reduce the chance of disease spread from animals to humans.[128]

III. ENVIRONMENTAL HARM AND RELATED REGULATION: WATER POLLUTION, WATER USAGE AND SCARCITY, AIR POLLUTION, AND CLIMATE CHANGE

A. Water Pollution and Regulation Under the Federal Clean Water Act

Compounding the direct, negative effects on human health from industrialized animal plants, factory farms pollute water in their surrounding communities and beyond.[129] Experts contend that these

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before antibiotics were discovered."). The World Health Organization used the phrase "post-antibiotic era" to refer to a future in which common infections become deadly due to the decreasing effectiveness of antibiotics, related, in part, to overuse of antibiotics in animal agriculture. Sara Reardon, *WHO Warns Against "Post-Antibiotic" Era*, NATURE (April 30, 2014), https://perma.cc/5GD8-E6N7.

123 *See* Amy Pruden, *Antibiotic Resistance Associated with CAFOs*, *in* HORMONES AND PHARMACEUTICALS GENERATED BY CONCENTRATED ANIMAL FEEDING OPERATIONS: TRANSPORT IN WATER AND SOIL 71, 71–72 (Laurence S. Shore & Amy Pruden eds., 2009) (stating further that the American Medical Association, the American Society for Microbiology, and the American Public Health Association have also all recommended a ban on sub-therapeutic animal antibiotic use).

124 *See, e.g.*, Greger, *supra* note 111, at 301 (discussing sanitation risks and pathogen spread associated with "immunosuppressive stress of prolonged transport" in bringing animals to slaughter); *McKiver*, 980 F.3d 937, 980 (4th Cir. 2020) (Wilkinson, J. Concurring) ("It is well-established that close confinement leads to the 'increased risk of the spread of disease 'between hogs." (quoting the Joint Appendix filed by parties)).

125 Ballard, *supra* note 56, at 287.

126 *Id.*

127 Greger, *supra* note 111, at 301 (noting that only 16% of livestock haulers cleaned their trucks between hauls and that such cleaning could reduce pathogens).

128 *See* Ballard, *supra* note 56, at 285 (noting that CAFOs are the perfect "pathogen conveyor belt" and greatly enhance the risk of emerging zoonotic disease).

129 JoAnn Burkholder et al., *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*, 115 ENV'T HEALTH PERSPS. 308, 308 (2007).

facilities produce somewhere between 1.1 and 2 billion tons of animal waste per year.[130] Other estimates describe the amount of animal waste produced by CAFOs at between three[131] and twenty times the amount of waste produced by all people in the United States.[132]

Animal waste is not confined to immediate areas around CAFOs but results in far reaching water pollution.[133] Groundwater constantly travels under the surface of the earth so that contamination in one area can result in contamination miles away.[134] One study in Iowa found that livestock thus contribute significantly to water quality degradation.[135] Experts have also reported that voluminous discharges of common pollutants from manure into the Gulf of Mexico have created "dead zones"—areas so polluted and oxygen deprived that they cannot support sea life.[136] Another group of researchers found that industrial animal farming pollutes 145,000 miles of rivers and streams, nearly one million acres of lakes, reservoirs and ponds, and more than 3,000 square miles of bays and estuaries in the United States.[137]

Experts have documented a range of contaminants in animal waste that have the potential to degrade ground and surface water through manure lagoon leakage or precipitation runoff.[138] These contaminants include veterinary pharmaceuticals, pesticides, bacteria, parasites, and heavy metals.[139] Exposure to animal waste contaminants occurs through drinking water in both private wells and community water sources, and health effects may include carcinogenesis, as well as effects on the endocrine and reproductive systems.[140] The full impact of these

130 *See* Douglas Main, *Two Numbers: Animal Manure a Growing Headache in America*, NEWSWEEK (Dec. 8, 2015), https://perma.cc/AX22-JATV; Thomas Hynes, *EPA Must Use the Clean Water Act to Regulate Concentrated Animal Feeding Operations*, WATERKEEPER ALL. (Nov. 10, 2022), https://perma.cc/5NJG-5JNS.

131 National Pollutant Discharge Elimination System (NPDES) Concentrated Animal Feeding Operation (CAFO) Reporting Rule, 76 Fed. Reg., 65431, 65433 (Oct. 21, 2011) (showing that animals on factory farms produce three times the wastes of humans).

132 HRIBAR, *supra* note 92, at 2.

133 Kolbe, *supra* note 90, at 420–22, 427; *Calif. Locals vs. Lake of Chicken Waste*, NBC NEWS (Feb. 19, 2010, 3:43 AM), https://perma.cc/VVT7-LUVY.

134 *See e.g.*, RACHEL CARSON, SILENT SPRING, 39–41, 44–45 (First Mariner Books ed. 2002) (describing instances where the impacts of water pollution are felt many miles from its source).

135 IOWA POLICY PROJECT, *supra* note 14, at i–ii.

136 Kolbe, *supra* note 90, at 422.

137 Daniel Faber, *Factory Farming and Climate Justice: How a Green New Meal Can Transform Our Food System and Heal the Planet*, GLOB. CTR. FOR CLIMATE JUST. (March 22, 2022), https://perma.cc/SS72-JK4C.

138 Burkholder et al., *supra* note 129, at 308.

139 *Id.*

140 *Id.* at 308, 309 (affirming that the effects of "numerous waterborne pathogens on humans are well known").

contaminants remains unknown—a deficit experts have called a "critical gap"[141]:

> [T]here is poor understanding of the impacts of fecal bacteria and other microbial pathogens from CAFO waste effluent contamination on aquatic communities; impacts of antibiotic-resistant bacteria created from CAFO wastes on aquatic life; impacts of organic nutrient forms preferred by certain noxious plankton; impacts from the contributed pesticides and heavy metals; and impacts from these pollutants acting in concert, additively or synergistically.[142]

Scientists have, however, begun to document how pollution from agricultural pesticides and other potentially endocrine-disrupting substances, such as synthetic hormones in the environment, may directly affect human fertility.[143] Scientist Theo Colburn and her co-authors of the famous book, *Our Stolen Future*, posited over two decades ago that pollution of the earth with endocrine-disrupting substances and human's resulting exposure could be threatening our very ability to reproduce.[144]

Although the federal Clean Water Act (CWA)[145] could potentially mitigate water pollution from wastes associated with industrial animal farming, the Environmental Protection Agency (EPA) has not systematically ensured that CAFOs adhere to the CWA's regulatory scheme.[146] The CWA prohibits the discharge of pollutants from a point source into navigable waters without a permit under the National Pollutant Discharge Permit System (NPDES).[147] However, factory farmers do not need a NDPES permit to apply some animal waste as fertilizer to fields[148] or to keep some of it in containment facilities.[149]

The CWA clearly identifies CAFOs as point sources under the CWA.[150] However, the Act allows an exception for surface water pollution that occurs where the CAFO has applied waste to the ground pursuant to

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141 *Id.* at 308, 310 (noting that exposure to animal waste contaminants may occur through drinking water in private wells and community water sources and that health effects may include carcinogenesis, endocrine effects, and reproductive effects).

142 *Id.* at 309–10.

143 Valerie J. Watnick, *Our Toxics Regulatory System and Why Risk Assessment Does Not Work: Endocrine Disrupting Chemicals as a Case in Point*, 4 UTAH L. REV. 1305, 1307–10, (2004).

144 *See generally* THEO COLBURN ET AL., OUR STOLEN FUTURE (1996) (recognizing the impacts of pollution on humanity's ability to reproduce).

145 Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. §§ 1251–1388 (2018).

146 Hynes, *supra* note 130.

147 Clean Water Act, 33 U.S.C. §§ 1311(a), 1342 (2018).

148 40 C.F.R. § 122.23(e)(1) (2023).

149 The CWA requires permits for discharges, not containment. *Id.* § 122.23(d); *see also* Burkholder et al., *supra* note 129, at 308 (describing contaminant leakage from poorly-contained manure lagoons).

150 33 U.S.C. § 1362(14); Hannah Conner, *Comprehensive Regulatory Review Concentrated Animal Feeding Operations Under the Clean Water Act*, 12 VT. J. ENV'T L. 275, 325 (2011).

an appropriate waste management plan, and that application results in stormwater runoff.[151] Thus, while a discharge of waste from a CAFO as a result of land application technically results in a discharge subject to NPDES permitting, this permitting requirement does not apply where the discharge is a result of agricultural stormwater.[152] Because farmers often use more fertilizer than the land can absorb, this may lead to stormwater runoff into nearby water-bodies and seepage into groundwater.[153] In addition, manure containment mechanisms may leak, allowing waste to seep into groundwater or run off into neighboring communities.[154]

Essentially, the CWA regulations allow industrial animal farming operations to avoid filing for a NPDES permit unless they are actually directly discharging pollutants into navigable waters.[155] In 2001 and 2003, the EPA attempted to bring large CAFOs within the jurisdiction of the CWA by requiring them to apply for an NPDES permit if they "proposed" to discharge pollutants, but courts in two separate industry challenges struck this "proposed" language down, absent a regulatory presumption of discharge by CAFOs.[156]

By one estimate, only 31% of CAFOs have filed for NPDES permits for their discharges.[157] CAFOs are able to skirt the obligation to apply for a NPDES permit by essentially spreading more manure than necessary on their lands to get rid of it; that way, even if rain results in pollution runoff to surrounding neighbors, or into groundwater, this run-off is not attributable to the operation.[158] Advocates have noted that overall, "agribusiness industry pressure and court challenges largely resulted in the backsliding of EPA's attempts to regulate the industry."[159] In consequence of this pressure, "EPA's federal CAFO NPDES permitting program has been gutted," and water pollution from CAFOs continues "unabated."[160]

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151 40 C.F.R. § 122.23(e); Waterkeeper All., Inc. v. U.S. Env't Prot. Agency, 399 F.3d 486, 509 (2d Cir. 2005); Diamond et al., *Agricultural Exceptionalism*, *supra* note 5, at 10741.

152 33 U.S.C. § 1362(14).

153 Leo Horrigan et al., *How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture*, 110 ENV'T HEALTH PERSPS. 445, 446 (May 2002). *See generally id.* (discussing how a paradigm shift in agricultural practices could help address environmental and human health issues).

154 Burkholder et al., *supra* note 129, at 308; *see* DAVID N. CASSUTO, ANIMALS & SOC'Y INST., POLICY PAPER, THE CAFO HOTHOUSE: CLIMATE CHANGE, INDUSTRIAL AGRICULTURE AND THE LAW 7–8 (2010) (discussing the rise of CAFOs and their harmful effects).

155 Nat'l Pork Producers Council v. U.S. Env't Prot. Agency, 635 F.3d 738, 751 (5th Cir. 2011).

156 *Id.*; *Waterkeeper All., Inc.*, 399 F.3d at 505.

157 Hynes, *supra* note 130.

158 *See* Emily Kenyon, *Enough of this Manure: Why the EPA Needs to Define The Agricultural Stormwater Exemption to Limit The "Runoff" From The* Alt *Court*, 92 N.Y.U. L. REV. 1187, 1218 (2017) (noting how CAFOs use the CWA's agricultural stormwater exemption to avoid NPDES requirements).

159 Diamond et al., *Agricultural Exceptionalism*, *supra* note 5, at 10740–41.

160 *Id.*

The Supreme Court's relatively recent decision in *County of Maui v. Hawaii Wildlife Fund* (*Maui*)[161] may present an opportunity to more closely regulate CAFOs under the CWA.[162] While the CWA regulates point source discharges to navigable surface waters, it has not been used to regulate discharges into groundwater,[163] even though contaminated groundwater can travel, move up, and contaminate surface waters, such as rivers, lakes, and streams.[164] *Maui* has the potential to change this situation: The *Maui* Court held that a discharge into groundwater that then contaminates surface water is the "functional equivalent" of a direct discharge.[165] At least one legal commentator has suggested that *Maui* might be an effective doctrinal tool to better regulate CAFOs within the NPDES scheme and for communities to hold more CAFOs accountable for water pollution.[166]

B. Worldwide Water Usage

In addition to the water pollution associated with CAFOs, industrial agriculture uses enormous amounts of fresh water, mostly to grow the food for the animals,[167] but also to service the stalls, operate the farm, and then slaughter the animals.[168] This extreme consumption continues even as the planet's existing freshwater supply is dwindling, and the population continues to grow.[169] Research suggests that the global supply of water is in jeopardy and that approximately five billion people will live in water-scarce areas for one month each year by 2050.[170]

This dire prediction is not however, inevitable. A 2018 U.N. report on worldwide water use and conservation noted that "[a]gricultural systems that rehabilitate or conserve ecosystem services can be as productive as intensive, high-input systems, but with significantly reduced externalities."[171] Thus, a cornerstone of worldwide water policy

161 140 S. Ct. 1462 (2020).

162 *Id.* at 1468.

163 *See* Jason R. Jones, *The Clean Water Act: Groundwater Regulation and the National Pollutant Discharge Elimination System*, 8 DICK. J. ENV'T L. & POL'Y 93, 111 (1999) (noting that the plain language and legislative history of the CWA do not support using it to regulate groundwater).

164 HRIBAR, *supra* note 92, at 4.

165 *Maui*, 140 S. Ct at 1468.

166 Ren, *supra* note 100, at 602.

167 Godfray et. al., *supra* note 7, at 4–5.

168 J. Heinke et al., *Water Use in Global Livestock Production—Opportunities and Constraints for Increasing Water Productivity*, WATER RES. RSCH., Dec. 2020, No. 2019WR026995 at 5.

169 FOOD & AGRIC. ORG. OF THE U.N., WATER FOR SUSTAINABLE FOOD AND AGRICULTURE, A REPORT PRODUCED FOR THE G20 PRESIDENCY OF GERMANY 4–5 (2017), https://perma.cc/5VDX-WTSA.

170 U.N. WATER, THE UNITED NATIONS WORLD WATER DEVELOPMENT REPORT 2018: NATURE-BASED SOLUTIONS FOR WATER 3 (2018), https://perma.cc/T8SC-VKP5.

171 *Id.* at 4. Agricultural water usage is directly relevant to industrial farming of animals as much of the vegetation grown is fed to animals. *See supra* notes 224–229 and accompanying discussion.

is the reduction of negative externalities through "conservation agriculture" that intensively improves sustainability through soil and plant management. .

C. Greenhouse Gasses and Climate Change

Factory farming continues to proliferate in the United States, where today, 99% of all the meat and other animal products now come from factory farms.[172] On these industrial farms, large numbers of ruminant animals release methane and nitrous oxide as part of their metabolic processes, gasses many times more potent than CO2 at inducing climate change.[173] Methane is, importantly, a more potent a greenhouse gas in the short term and would not be released if not for the ruminant's digestive processes.[174] Additionally, animal agriculture concomitantly contributes to CO2 emissions by requiring vast clearings of land for animal grazing and for the production of the soy and corn to feed industrially raised animals.[175]

After a resource-intensive harvest, these animal food sources must be transported, expending additional fossil fuels.[176] The sheer size of large, animal factory farms also means their day-to-day operations also involve heavy usage of fossil fuels.[177] Overall, at least one expert has argued that animal agriculture is the single greatest cause of ongoing climate change—a greater cause than even the transportation industry.[178] Other experts note that total global food systems contribute one third of all greenhouse gas emissions.[179] Expert opinions converge in agreement in that animal agriculture contributes somewhere between 14 and 51% of all greenhouse gasses produced annually.[180] More strikingly

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172 Christine Ball-Blakely, *CAFOs: Plaguing North Carolina Communities of Color*, SUSTAINABLE DEV. L. & POL'Y, Fall 2017 at 4; *see also* U.S. DEP'T OF AGRIC., AC-17-A-51, 2017 CENSUS OF AGRICULTURE: UNITED STATES SUMMARY AND STATE DATA 2 (2019) (reporting drops in the number of family, individual, and partner farms, alongside a rise in the number of corporate farms); IOWA POLICY PROJECT, *supra* note 14, at 1 (noting that Iowa has four times as many CAFOs in 2014 as it did in 2001).

173 HRIBAR, *supra* note 92; Doug Boucher, *Movie Review: There's a Vast Cowspiracy About Climate Change*, THE UNION OF CONCERNED SCIENTISTS: THE EQUATION (June 10, 2016, 10:31 AM), https://perma.cc/3RQX-5NE9.

174 Boucher, *supra* note 173.

175 FOOD & AGRIC. ORG. OF THE U.N., LIVESTOCK'S LONG SHADOW: ENVIRONMENTAL ISSUES AND OPTIONS 272 (2006), https://perma.cc/7JNS-X6TH.

176 *New FAO Report Maps Pathways Towards Lower Livestock Emissions*, FOOD & AGRICULTURE ORG. OF THE U.N. (Aug. 12, 2023), https://perma.cc/5TMR-PQC8.

177 Ronnie Cummins, *How Factory Farming Contributes to Global Warming*, ECOWATCH (Jan. 21, 2013, 9:22 AM), https://perma.cc/23JD-SG9U.

178 HRIBAR, *supra* note 92, at 7.

179 Charles Arthur, *New Research Shows Food Systems are Responsible for a Third of Global Anthropogenic Emissions*, U.N. INDUST. DEVEL. ORG. (June 16, 2021), https://perma.cc/NZ5D-7WEZ; KIP ANDERSEN & KEEGAN KUHN, THE SUSTAINABILITY SECRET (2015); Lehner, *supra* note 24, at 10099.

180 Boucher, *supra* note 173; KIP ANDERSEN & KEEGAN KUHN, THE SUSTAINABILITY SECRET 10–11 (2015).

perhaps, greenhouse gasses from animal farming operations have increased by 10% since the 1990s, while other sources of greenhouse gasses have decreased in this time period.[181]

D. Air Pollution and Regulation Under the Federal Clean Air Act

In its Risk Assessment Evaluation of CAFOs in 2004, EPA recognized that, in addition to greenhouse gasses, animal factory farms directly contribute to air pollution in surrounding communities.[182] Research finds that those who live near factory farms have higher relative rates of asthma and degraded quality of air around their homes.[183] School proximity to concentrated animal feeding operations also increases the prevalence of asthma in students.[184] Experts have likewise consistently reported increases in childhood asthma or wheezing in adolescents when considering schools within a three mile radius of CAFOs.[185] Additionally, one team of experts on environmental health found that odors both in and outside the schools were common near to CAFOs.[186] The scientists studying sixty-six schools located within three miles of a CAFO found noticeable odors around the schools 21% of the time and inside of the schools 8% of the time.[187] More than just mildly unpleasant, odor can have serious consequences—mood studies show odor affects cognition and mood.[188] Additional studies show odor can cause worry, annoyance, and other physical manifestations in those exposed.[189] Yet more studies have shown that adults suffered increased incidences of wheezing and eye irritation when they lived in close proximity to a CAFO.[190] Worsening these effects in terms of environmental justice, the people most affected

181 Ben Lilliston, *Latest Agriculture Emissions Date Show Rise of Factory Farms*, INST. FOR AGRIC. & TRADE POL'Y (Mar. 26, 2019), https://perma.cc/L5XU-R2BA.

182 EPA, RISK ASSESSMENT *supra* note 6, at 63–69.

183 IOWA POLICY PROJECT, *supra* note 14, at 3 (considering the whole health of individuals).

184 Sigurdur T. Sigurdarson & Joel N. Kline, *School Proximity to Concentrated Animal Feeding Operations and Prevalence of Asthma in Students*, 129 CHEST 1486, 1489 (2006); Maria C. Mirabelli et al., *Asthma Symptoms Among Adolescents Who Attend Public Schools that are Located Near Confined Swine Feeding Operations*, 118 PEDIATRICS, Jul. 2006, at 7 [hereinafter Mirabelli et al., *Asthma Symptoms*].

185 Maria C. Mirabelli et al., *Race, Poverty, and Potential Exposure of Middle-School Students to Air Emissions From Confined Swine Feeding Operations*, 114 ENV'T HEALTH PERSPS. 591, 592 (2006) [hereinafter Mirabelli, *Race, Poverty*]; Mirabelli et al., *Asthma Symptoms, supra* note 184, at 7.

186 Mirabelli et al., *Asthma Symptoms, supra* note 184, at 7.

187 Mirabelli et al., *Race, Poverty*, *supra* note 185, at 592–93.

188 James Rotton, *Affective and Cognitive Consequences of Malodorous Pollution*, 4 BASIC & APPLIED SOC. PSYCH. 171, 172, 189 (1983).

189 Dennis Shusterman et al., *Symptom Prevalence and Odor-Worry Interaction Near Hazardous Waste Sites*, 94 ENV'T HEALTH PERSPS. 25, 29 (1991); Wing et al., *Air Pollution and Odor in Communities*, *supra* note 17, at 1362, 1367.

190 IOWA POLICY PROJECT, *supra* note 14, at ii; Wing et al., *Air Pollution and Odor in Communities*, *supra* note 17, at 1362; Schinasi et al., *Concentrated Swine Feeding Operations*, *supra* note 17, at 208, 214.

by CAFOs are those living in nearby surrounding areas, communities that are often already marginalized, underserved, and impoverished.[191]

While the EPA could technically use the federal Clean Air Act (CAA)[192] to regulate air pollution from CAFOs and mitigate some of the above effects, the industry has generally remained beyond such regulation. Exemption from regulation under the CAA serves as a strong example of how the agricultural industry has succeeded in gaining "agricultural exceptionalism"—special treatment under the law well documented in the legal literature.[193]

In particular, this treatment of CAFOs under the CAA stems in part from an agreement made between EPA and industry more than thirty years ago.[194] In the late 1990s, the animal agriculture industry suggested to the EPA that it engage in an air testing program to determine air emissions and help EPA develop consistent factors for regulation.[195] Pursuant to the 2005 agreement, participating operations were to receive immunity from prosecution for air quality standard violations pending the outcome of this air quality testing program.[196] EPA completed its emissions study years ago,[197] but has not yet finalized its rules on air emission standards for CAFOs.[198] Moreover, CAFOs that did not sign onto the monitoring deal benefited during this intervening period, as they, along with the actual signatories to the monitoring deal, have not sought CAA pollution emission permits under the premise that EPA had not finalized its emissions rules for CAFOs.[199] On this basis, industrial farming operations contend that there is too much uncertainty to regulate or even measure their air emissions.[200] As of 2020, very few CAFOs had been significantly regulated under the CAA,[201] and EPA had no method

191 Greco, *supra* note 16, at 322–23, 326 (noting that many workers face immigration challenges and education, language, and cultural barriers); Shawn Fremstad et al., *supra* note 102 (noting that meatpackers are a diverse group in need of protection); Ren, *supra* note 100, at 566 (noting that industrial animal farming operations "disproportionately situated in regions populated by minority, indigent, and uneducated groups").

192 Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q.

193 Diamond et al., *Agricultural Exceptionalism*, *supra* note 5, at 10741–47 (arguing that agriculture is in its own special regulatory class, at least in part due to consolidation of power, need for services, and right-to-farm laws); *see* Lily Moran, *Pretextual Preemption: The Modern Weaponization of Preemption in the Regulation of Concentrated Animal Farming Operations*, 170 U. PA. L. Rev. 1589, 1599–1603 (2022) (discussing the existing regulatory structure governing CAFOs and its shortfalls).

194 Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4958, 4958 (Jan. 31, 2005).

195 *Id.* at 4960.

196 Diamond et al., *Agricultural Exceptionalism, supra* note 5, at 10742.

197 *Id.*

198 *Id.*

199 *Id.*

200 *Id.*

201 Joe Wertz, *How Big Farms Got a Government Pass on Air Pollution*, CTR. FOR PUB. INTEGRITY (Sept. 16, 2020), https://perma.cc/HH25-QFXU; Diamond et al., *Agricultural Exceptionalism*, *supra* note 5, at 10742.

in place to accurately measure CAFO air pollution.[202] In the meantime, those people who live near and work in animal feeding operations do not get the benefits of CAA regulation.

In 2017, the District of Columbia Circuit Court finally heard a challenge by Waterkeeper Alliance related to agricultural air pollution.[203] The challenge did not, however, relate directly to the CAA.[204] Rather, Waterkeeper Alliance challenged the existence of an EPA rule that allowed CAFOs to not report what appeared to be "reportable" releases of air pollutants under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)[205] and the Emergency Planning and Community Right-to-Know Act (EPCRA),[206] the latter designed to increase transparency and allow for emergency planning.[207] The court vacated the EPA final rule exempting CAFOs from reporting hazardous air pollutants from animal waste under CERCLA and EPCRA, noting that the statutes required reporting as it could be useful to further the regulatory objectives of the laws.[208] However, Congress responded by specifically exempting animal factory farms from the requirement to report hazardous air pollutants from animal waste under CERCLA.[209] EPA, under then President Trump, finalized a rule to cement this lack of reporting in 2019.[210]

IV. EFFECTS ON DISEMPOWERED COMMUNITIES AND COMMUNITIES OF COLOR

Areas that suffer the most from factory farm environmental pollution, including air and water pollution, are often poorer, non-white communities.[211] One study of the large scale U.S. grocery retailer Costco found that CAFOs are intentionally sited in marginalized, impoverished communities, mostly of Latinx origin, and that these communities

202 Madison McVan, *18 Years and Counting: EPA Still Has No Method for Measuring CAFO Air Pollution*, MISSOURI INDEPENDENT (Apr. 21, 2023, 6:45 AM), https://perma.cc/VWJ5-JVCG.

203 Waterkeeper All. v. U.S. Env't Prot. Agency, 853 F.3d 527, 529–30 (D.C. Cir. 2017).

204 *Id.* at 530, 532.

205 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601–9675 (2018).

206 Emergency Planning and Community Right-to-Know Act (EPCRA), 42 U.S.C. §§ 11001–11050.

207 *Waterkeeper All., Inc.*, 853 F.3d at 530–31; *see also* Diamond et al., *Agricultural Exceptionalism*, *supra* note 5, at 10742 (noting how the EPCRA serves to provide accurate information on the release of toxic chemicals and to use reported information to help plan for an emergency).

208 *Waterkeeper All., Inc.*, 853 F.3d at 535–38.

209 Fair Agricultural Reporting Method (FARM) Act, Pub. L. No. 115–141, §§ 1101–1103, 132 Stat. 350 (2018) (to be codified at 42 U.S.C. § 9601–9603).

210 Amendment to Emergency Release Notification Regulations on Reporting Exemption for Air Emissions From Animal Waste at Farms; Emergency Planning and Community Right-to-Know Act, 84 Fed. Reg. 27533, 27533 (June 13, 2019) (to be codified at 40 C.F.R. pt. 355); Wertz, *supra* note 201.

211 THE HUMANE LEAGUE, *supra* note 26; *see supra* text accompanying notes 98–102.

experienced related health effects from air pollution that included asthma and heart disease.[212] Indeed, "[e]nvironmental pollution from factory farms is what drives [agri]businesses into lower-income communities in the first place."[213] In this way, industrial animal farming foists its worst effects on those who cannot afford to move away.[214] Additionally, "[f]actory farms operate off of the assumption that people in these places will put up less of a fight than more affluent, white-dominated areas."[215] Large businesses thus site their facilities in communities less able and less willing to fight back.[216] In essence, large industrial animal operations and their siting highlight important societal questions around environmental justice and fairness for rural communities.

The continual formation of new CAFOs[217] perpetuates this type of structural racism, especially as the factory farming industry becomes further rooted in our economy and consolidates its power. Professor Courtney G. Lee describes how racism had been deeply embedded in the U.S. industrial agricultural system long before the explosion of CAFOs, noting that racism exists as to farmers and ranchers, workers, communities, and as to consumers.[218] Professor Lee makes a powerful case that today, large agricultural operations typically function as "integrators" that control all of the means of animal production.[219] They order feed, deliver animals, control the methods of raising the animals, including supplements, and mandate changes and add-ons to animal structures that can cost farmers and ranchers so much money that they go deeply into debt.[220] This system of operation weakens small farmers and makes them beholden to the large companies that control industrial animal agriculture through the integration process.

Professor Lee goes further, arguing that the final stop of the food production cycle, whereby the consumer buys the food, also serves to further entrench environmental racism and discrimination inherent in the factory farm system. "Redlined" neighborhoods, or those discriminatorily denied financial services such as insurance or loans, often have limited access to quality food, which in turn contributes to

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212 Sanaz Chamanara et al., *Where's the Beef? Costco's Meat Supply Chain and Environmental Justice in California*, 278 J. CLEANER PROD., Jan. 2021, at 6; *see also* Courtney G. Lee, *Racist Animal Agriculture*, CUNY L. Rev. 25, 199, 223 (2022) ("Industrial animal agricultural facilities often are intentionally sited in rural regions comprised primarily of lower socioeconomic groups and people of color. . . .").

213 THE HUMANE LEAGUE, *supra* note 26.

214 Lee, *supra* note 212, at 223–24.

215 THE HUMANE LEAGUE, *supra* note 26; *see also McKiver*, 980 F. 3d 937, 982 (4th Cir. 2020) (Wilkinson, J., Concurring) (noting that large industrial animal facilities are sited in poorer, less powerful communities).

216 Lee, *supra* note 212, at 223–24.

217 There has been a large rise in CAFOs in recent years. Prisco, *supra* note 29, at 887–88 (2022). Iowa, for example, had four times as many CAFOs in 2018 as it had in 2001. IOWA POLICY PROJECT, *supra* note 14, at 1.

218 Lee, *supra* note 212, at 205–31.

219 *Id.* at 214.

220 *Id.*

greater incidences of obesity, diabetes, and heart disease in these communities.[221]

Worse still, this giant agricultural machine is largely inefficient at feeding the world's populations with the most need[222]—a world that faces a global food crisis in which up to 783 million people go hungry every day.[223] For animal agriculture to function, a large percentage of crops must be fed to the animals.[224] By one estimate, only 55% of the vegetation grown globally is used for human food.[225] Inefficient use of feed for animals raised for consumption directly contributes to worldwide hunger because the grains could feed more people more calories than when fed to animals.[226] More so, feeding farmed animals accounts for a major proportion of worldwide land use,[227] with approximately one-third of U.S. land used exclusively for animal grazing.[228] Overall, 41% of U.S. land revolves around feeding livestock.[229]

V. RECENT ATTEMPTS TO FURTHER REGULATE CAFOS

Concerned over the growing use of land for animal agriculture and the growth of CAFOs in the United States, the Senate and the House have both recently introduced bills to stem the operations of large industrial agriculture and to make the animal processing business more humane.[230] In 2023, Congress introduced versions of the Farm System Reform Act,[231] Protecting America's Meatpacker's Act,[232] and the Industrial Agriculture Accountability Act (IAAA).[233] These bills are replete with references to improving the plight of workers, the community, and the animals.

The findings included in the IAAA substantiate the many and diverse abuses of the industrial animal agriculture industry. For example, the Act noted: "[E]xploitative conditions . . . including being required to spend long hours . . . involved in mass-killing [of] farmed animals . . . lead[s] to long-term psychological impacts [on workers],

221 Lee, *supra* note 212, at 228–29.

222 FOOD & AGRIC. ORG. OF THE U.N., *supra* note 169, at 1–2 (highlighting the need for intensified sustainable agriculture to save our water sources).

223 *10 Quick Facts on Global Hunger and the United Nations World Food Programme's Life-Changing Work*, U.N. WORLD FOOD PROGRAM USA (Nov. 15, 2022), https://perma.cc/FVV3-C28F.

224 *Id*.

225 *Id*.

226 *Id*. at 45.

227 *Id*. at 43.

228 Dave Merrill & Lauren Leatherby, *Here's How America Uses Its Land*, BLOOMBERG (July 31, 2018), https://perma.cc/AB6W-4QFX.

229 *Id*.

230 Farm System Reform Act of 2023, S. 271, 118th Cong. (2023); Protecting America's Meatpacking Workers Act of 2021, S. 3285, 117th Cong. (2021); Industrial Agriculture Accountability Act of 2022, S. 5138, 117th Cong. (2022).

231 Farm System Reform Act of 2023, S. 271, 118th Cong. (2023).

232 Protecting America's Meatpacking Workers Act of 2023, S. 270, 118th Cong. (2023).

233 Industrial Agriculture Accountability Act of 2023, S. 272, 118th Cong. (2023).

including increased feelings of anger and stress."[234] Congress additionally documented that the effects of animal feeding operations on neighboring communities include manure-filled flood waters, algae blooms, and wildlife population crashes.[235]

The IAAA further established that since 2019, animal cullings—when animal farm populations must be intentionally reduced—have resulted in the deaths of more than 60 million birds and more than 10 million swine.[236] Industrial farmers execute these cullings by way of sodium nitrate poisoning, ventilation shutdown, and water-based foaming.[237] To give context to how horrific these methods of mass killings are, water foaming is the process of pumping enough water into housing facilities to drown the animals confined inside.[238] Opting to dismantle this practice, the IAAA would prohibit culling by water foaming, as well as culling by sodium nitrate poisoning and ventilation shutdown.[239] Instead, the Act would create the Office of High-Risk AFO Disaster Mitigation and Environment in the U.S. Department of Agriculture[240] and require animal feeding operations to have a disaster plan that accounts for animals in the case of disaster or extreme weather.[241] The Act should go further, though, and specifically require plans that include humane methods of culling, if necessary.

Other provisions in the IAAA seek to improve working conditions by setting minimum labor standards, such as health insurance requirements, whistleblower protections, and severance pay after a disaster.[242] According to the Act, workers could also enforce these rights through a private right of action.[243] The Act would likewise provide the Secretary of Labor with enforcement powers.[244]

In addition to these changes, the IAAA also contains a federal humane handling provision that would require farmers transporting animals to provide those animals with shelter from high winds, rain, and snow and bedding appropriate to absorb urine and feces.[245] This section of the IAAA would also require transporters to provide water for animals during transit, and to keep temperatures during transport between forty and eighty-six degrees Fahrenheit.[246] The Act would also change the existing federal twenty-eight hour rule, which prohibits transport for

234 *Id.* § 3(1)(C)(ii) (1st Sess. 2023).
235 *Id.* § 3(1)(C)(iii).
236 *Id.* § 3(2)(A).
237 *Id.* § 3(2)(B).
238 *Id.* § 114(a)(5).
239 *Id.* § 114(a)(1).
240 *Id.* § 111.
241 *Id.* § 112(a)(2)(B)(ii).
242 *Id.* § 122(b)(1)–(3).
243 *Id.* § 122(d)(1).
244 *Id.* § 122(d)(3).
245 *Id.* § 311(d)(1)(A), (B)(iii).
246 *Id.* § 311(d)(1)(D)–(F).

more than twenty-eight hours without rest, food, or water absent some accidental circumstances,[247] to an eight hour rule.[248]

Importantly, an eight hour rule would expose animals to fewer stressors, stressors that are more likely to result in the development of novel pathogens, pathogens that also might spread to humans. "So called 'shipping fever,' for example, the bovine version of which costs U.S. producers more than $500 million a year, is often caused by latent pathogens that may become active when shipping cattle long distances."[249] Temperature requirements for animal transport would not only provide a more humane method of transport, but should likewise prevent animals from arriving at their destinations frozen to death or dead from heat exhaustion. Moreover, experts have warned that transport of animals over long distances presents potential bio-terroristic threats to humans as shipments could be attacked and used to cause major disruptions to animal and human life.[250] Described as a unique and easy target, government models predict that intensive animal agriculture could spread a pathogen to twenty-five states in just five days.[251]

While the tightening of shipping rules for live animals might be costly in the short term, businesses would likely reap long term benefits in terms of healthier animals and greater biosecurity.[252] Thus, a business argument exists: not only would the eight hour rule (and other changes suggested by the IAAA) be more humane than the existing federal twenty-eight hour law,[253] but it is also likely to prevent disease development and keep animals in better health.[254]

The proposed new law, in addition to making transport more humane, importantly calls for the inclusion of poultry in the Humane

247 49 U.S.C. § 80502 (2018).

248 Industrial Agriculture Accountability Act of 2023, § 311(b)(1)(A).

249 Greger, *supra* note 111, at 301.

250 PETER CHALK, RAND NAT'L DEF. RSCH. INST., HITTING AMERICA'S SOFT UNDERBELLY: THE POTENTIAL THREAT OF DELIBERATE BIOLOGICAL ATTACKS AGAINST THE U.S. AGRICULTURAL AND FOOD INDUSTRY, at xi (2004), https://perma.cc/27YS-PNUJ.

251 Greger, *supra* note 111, at 303 ("Given that 'highly crowded' animals are reared in 'extreme proximity in the U.S. . . . one infected animal could quickly expose thousands of others.").

252 *Id.* at 304.

253 Former USDA veterinary inspector Dr. Lester Friedlander has importantly noted aspects of the 28 Hour Law that are simply not humane:

> "In the summertime, when it's 90, 95 degrees, they're transporting cattle from 1,200 to 1,500 miles away on a trailer, 40 to 45 head crammed in there . . .. [In the winter], can you imagine if you were in the back of a trailer that's open and the windchill factor is minus 50 degrees, and that trailer is going 50 to 60 miles an hour? The animals are urinating and defecating right in the trailers, and after a while, it's going to freeze, and their hooves are right in it. If they go down—well, you can imagine lying in there for 10 hours on a trip."

Julie Knopp, *Live Transport: What Happens to Farm Animals During Transport*, HUMANE LEAGUE (Feb. 20, 2023), https://perma.cc/FYQ4-58E6.

254 Greger, *supra* note 111, at 305.

Slaughter Act.[255] In this vein, the Act would provide grants and promote pilot programs to encourage use of controlled atmospheric stunning to render poultry unconscious before slaughter.[256] Finally, the IAAA would likewise prohibit the slaughter of animals that are unable to walk and prevent future line speed increases,[257] a change notably aimed at protecting workers.

Most tellingly, and as a true measure of our changing times and consumer demand, the proposed IAAA contains a federal humane housing law much like the one recently passed in California and for which I have argued in prior work.[258] The provisions in the IAAA would require industrial facilities to have housing that allows animals to stand up, turn around, lie down and fully spread their limbs.[259]

In addition to the Industrial Agriculture Accountability Act proposal, Senator Booker and Representative Ro Khana introduced the Farm System Reform Bill of 2023.[260] This law would prohibit all new CAFOs after January 1, 2041 and all expansions of CAFO farming operations immediately upon enactment.[261] This prohibition on expansion comports with expert recommendations to freeze the footprint of big agriculture to more sustainably and effectively feed the world.[262] However, 2041 is too long to wait to freeze expansion of the existing CAFO system. The proposed Act should instead include a shorter period of adoption to meet climate targets and reduce ongoing pollution.

In addition, the proposed Farm System Reform Act also defines "integrators"[263] and would hold them liable for pollution related to operations, even if the integrators contract with other and smaller

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255 Industrial Agriculture Accountability Act, S. 272, 118th Cong. § 323 (2023); Humane Slaughter Act, 7 U.S.C. § 1902(a) (2018).

256 Industrial Agriculture Accountability Act, S. 272, 118th Cong. §§ 201–203.

257 *Id.* § 332. This section of the Act would revoke the 2019 Modernization of Swine Slaughter Inspection Act, 84 Fed. Reg. 52300 (October 1, 2019).

258 Industrial Agriculture Accountability Act, S. 272, 118th Cong. § 311(d)(2); *Proposition 12: Establishes New Standards for Confinement of Certain Farm Animals; Bans Sale of Certain Non-Complying Products. Initiative Statute.*, LEGIS. ANALYST'S OFF. (Nov. 6, 2018) https://perma.cc/922N-EFQR; Valerie J. Watnick, *Proposition 12 and a New Paradigm for Federal Law: Toward More Humane and Ethical Farm Animal Practices in California and the U.S.*, BUS. ENTREPRENEUR & TAX L. REV., 2022, at 25–27 [hereinafter Watnick, *Proposition 12*].

259 Industrial Agriculture Accountability Act, S. 272, 118th Cong. § 311(d)(2).

260 Farm System Reform Act of 2023, S. 271, 118th Cong. (2023); Press Release, Khanna, Booker Reintroduce Farm System Reform Act (July 13, 2021) https://perma.cc/32EE-8MQN.

261 *Id.* §§ 102(a) & (b).

262 Jonathan Foley, *A Five-Step Plan to Feed the World*, NAT'L GEOGRAPHIC, May 2014, at 26, 43.

263 Farm System Reform Act of 2023, S. 271, 118th Cong. § 101(5) (defining integrator as "an individual or entity that contracts with a contract grower under a grow out contract, marketing arrangement, or other arrangement under which the contract grower raises and cares for livestock or poultry at an AFO in accordance with the instructions of the integrator for the purpose of slaughtering the livestock or poultry or selling the livestock or poultry for slaughter, if the livestock or poultry is sold or shipped in commerce").

farmers to run day-to-day operations.[264] This means that any large corporate organization acting as a controlling integrator would be held accountable for water and air pollution issues, not the small farmer running the daily operations.

Finally, in the last Congress, legislators introduced the Protecting America's Meatpacking Workers Act, citing exploitive conditions for workers and abusive employer behavior that includes shouting, humiliation, threats, and patterns of sexual harassment.[265] Congress demonstrated a need for action, specifically noting the long-term psychological impacts on workers, including feelings of anger that might lead a worker to more aggressively and inhumanely slaughter animals, as well as panic and fear wrought by COVID-19.[266] The Act would allow meat-packing workers protection from retaliation for communication of health and safety concerns[267] and would allow workers to sue for damages for violations of their rights, with awards of attorneys' fees possible.[268] Most importantly, the proposed Act states that within thirty days, the Secretary shall implement an inspection program to address amputation hazards, ergonomics, hazards regarding fast line speeds, bathroom breaks, use of chemicals as antimicrobials, and extremely high or low temperature working conditions.[269] Catalogued in the bill specifically, requirements to respect basic human needs like bathroom breaks and keeping temperatures within a reasonable range are eminently reasonable inclusions targeting human decency and safety. A savvy and ethical corporate entity could easily make the case that support for such requirements makes sound business sense. In the next section, I propose just that: support for reform and what I will call the "business case" for such support from large corporations. I will lead with several examples of situations where corporations have supported social and environmental sustainability reforms in the past that have enured to their benefit.

VI. THE BUSINESS CASE FOR SUSTAINABLE CHANGES IN INDUSTRIAL ANIMAL AGRICULTURE: REGULATION, CONSUMER PRESSURE, AND MEDIA

Although proposed federal laws attempt to mitigate some of the negative effects of industrial animal agriculture in the United States, industrial agriculture remains a problem of immense and thorny dimensions to be collectively solved. In this Part, I thus propose a multi-pronged approach involving consumer pressure, media, a federal regulatory framework, *and voluntary corporate buy-in*. We must get corporations to see the "business case" for action in this area: that producing less, potentially for a higher price, in a more sustainable and

264 *Id.* § 104(a).
265 Protecting America's Meatpacking Workers Act of 2023, S. 270, 118th Cong. § 2(8).
266 *Id.* § 2(5).
267 *Id.* § 126.
268 *Id.* § 130(a) & (b).
269 *Id.* § 124(a)(1).

ethical manner, is good business and will better serve the public, society and the environment.[270]

This proposition begins with the premise that state laws create a patchwork system of animal care that might prompt industrial agricultural giants to actually prefer the certainty of one federally regulated animal agricultural system. In this context, a sweeping federal animal farming law, greater media and academic attention, corporate buy-in, and consumer pressure can collectively create necessary change.

A. State Laws Create a Patchwork System: The Need for Federal Law

California's propositions on humane animal housing, Proposition 2,[271] and more recently, Proposition 12,[272] along with the recent upholding of Proposition 12 by the U.S. Supreme Court[273] discussed below,[274] portend major changes in how animals are raised for food in the United States today.

While California's first pass at humane animal housing in Proposition 2 called for the banning of battery cages for all egg-laying hens, an amendment extended this to include hens for all eggs sold in California, whether raised in state or not.[275] Thus, Proposition 2 affected how hens live and eggs are produced in multiple states outside of California.[276] California's Proposition 12 took this farm animal protection legislation further, requiring specific space requirements for all pigs and veal calves whose flesh is sold in California, again whether raised in California or not.[277] Because California consumes much more animal meat than it raises and the animals that produce this meat are often raised out of state, Proposition 12's effect will extend beyond the borders of the state.[278] For example, Californians consume somewhere around 13% of all pork raised nationwide, yet the state produces a tiny fraction of that pork.[279] Proposition 12 therefore has the potential to impact pork production and animal care practices in a large stretch of the United States.[280]

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270 *See* discussion *infra* text accompanying notes 296–331.

271 CAL. HEALTH & SAFETY CODE §§ 25990–25994 (West 2024).

272 *Id.*

273 National Pork Producers Council v. Ross, 143 S. Ct. 1142, 1145 (2023).

274 *See infra* text accompanying notes 284–287.

275 CAL. HEALTH & SAFETY CODE §§ 25990(b)(3), 25591(e) (2022).

276 Watnick, *Laying Hens*, *supra* note 46, at 77.

277 CAL. HEALTH & SAFETY CODE §§ 25990(b)(1)–(2), 25991(e) (2022).

278 Adam Liptak, *Supreme Court Wrestles with Case on Pigs, Cruelty and Commerce*, N.Y. TIMES (Oct. 11, 2022), https://perma.cc/M7UZ-WG8H.

279 Adam Liptak, *Supreme Court Upholds California Law on Humane Treatment of Pigs*, N.Y. TIMES (May 11, 2023), https://perma.cc/R59T-BPR4.

280 *Nat'l Pork Producers Council*, 143 S. Ct. 1142, 1144, 1157 (2023) (refusing to strike down Proposition 12 because it would have an extraterritorial effect and noting that California imports the vast amount of pork that its citizens use).

Indeed, California has in the past exerted market influence to protect the environment,[281] or to move forward with sustainability initiatives.[282] For example, California was the first jurisdiction in the world to require all new light and medium duty vehicles to be zero emission vehicles by 2035.[283]

In light of the potential for impact beyond California, the National Pork Producers Council, an industry advocacy group, unsurprisingly challenged California's Proposition 12. The Council alleged that the proposed law violated the dormant Commerce Clause of the U.S. Constitution by impermissibly burdening interstate commerce.[284] On appeal from the Ninth Circuit, on May 11, 2023, the U.S. Supreme Court upheld the California law.[285] The Court held that the California law did not violate the Commerce Clause because the legislature had not designed Proposition 12 to restrict out of state business or to benefit in state business at the expense of out of state businesses.[286] In effect, the Court affirmed California's right to regulate the agricultural products that are sold in its state.[287] Critically, this decision paves the way for additional states to make laws regarding agricultural products and set quality standards for what is sold in their respective states vis-à-vis the care of animals and workers in their states.

Tellingly, several other states had already passed laws requiring the humane treatment of animals. For example, in Massachusetts[288] and Michigan,[289] legislatures have passed new laws that require improved housing conditions for egg-laying chickens and other animals. These laws differ, however, from California's Proposition 12. Michigan, for example, only allows penning of sows immediately before delivery, while other states such as Kentucky, allow penning of the sow for the entire

281 *See* Cal Air Res. Bd., Advanced Clean Cars II: Proposed Amendments to the Low Emission, Zero Emission, and Associated Vehicle Regulations: Standardized Regulatory Impact Assessment (Mar. 29, 2022), https://perma.cc/HB4C-LEU3. Other states have since announced an intent to follow California's lead; Dan Bosch, *California*'s *Zero Emissions Vehicle Rule and Its Nationwide Impacts*, AM. ACTION F. (Oct. 25, 2022), https://perma.cc/XK8F-FDA2.

282 *See, e.g.*, Safe Drinking Water and Toxic Enforcement Act, CAL. HEALTH & SAFETY §§ 25249.5–25249.14 (West 2024). The Safe Drinking Water Act, enacted with Proposition 65, requires warning labels on products on the Proposition 65 list that are known to the State to be carcinogenic or otherwise harmful to people. *Proposition 65*, CALIF. OFF. OF ENV'T & HEALTH HAZARD ASSESSMENT, https://perma.cc/95W9-D4RL (last visited Mar. 22, 2024).

283 Press Release, Office of Governor Newsom, California Approves World's First Regulation to Phase Out Dirty Combustion Trucks and Protect Public Health (Apr. 28, 2023), https://perma.cc/SB6J-P5Z7; Bosch, *supra* note 281.

284 *Nat'l Pork Producers Council*, 143 S. Ct. at 1151.

285 *Id.* at 1165.

286 *Id.*

287 *See id.* at 1150, 1165.

288 An Act to Prevent Cruelty to Farm Animals, 2016 MASS. ACTS 333.

289 Animal Industry Act, 2019 Mich. Pub. Acts. No. 132 (codified at various sections of MICH. COMP. LAWS).

pregnancy.[290] "With at least 14 states legislating in this area, and with varied and detailed state laws requiring different practices, industry will need lawyers conversant in all of the intricacies of state statutes and rules to sort out the various requirements for housing and labeling to show compliance."[291] Due to their intricacy and differences, these patchwork laws have the potential to lay the groundwork for a more workable federal law—a law championed by industrial animal agricultural firms as differing and conflicting state laws tend to make production difficult for corporate meat producers.[292] Thus, while state legislation presents challenges for corporate meat producers, its patchwork nature may end up nudging corporate actors toward either voluntarily seeking a federal standard of humane housing, slaughter, and transport or voluntarily complying with California's law across the country or both, resulting in more spacious and humane living circumstances for farmed animals all over the U.S.

A federal law like the IAAA could likewise begin to abrogate some of the most inhumane animal care practices and move corporate actors to provide more humane animal housing and transport practices. For example, the IAAA's proposed humane housing standards mirror Californian's Proposition 12. Additionally, the IAAA's revision of the federal twenty-eight hour law to an eight-hour law would require more humane transport with shorter periods between rest and water, as well as temperature controls for the animals.[293] This is not an inconceivable result as other nations currently operate with more humane animal transport laws. Europe, for instance, restricts animal transport to nine to twenty-four hours total duration, with watering every eight to fourteen hours.[294] Canada has also worked toward reducing animal load density on trucks and providing more frequent feeding and watering of animals during transport.[295]

B. Consumer Demand, Media and Corporate Buy In

Experts believe that "buyer demand for better animal welfare, as well as healthier food,"[296] is largely driving the many new and ongoing

290 *See* Animal Industry Act, § 287.746(3)(f) (2024); Janet Patton, Agricultural Board Approves Livestock Care Standards Despite Objections, LEXINGTON HERALD-LEADER (Mar. 27, 2013), https://perma.cc/2UPN-HV8K (archived Oct. 2, 2015) (Kentucky Livestock Boards have not banned penning of pregnant sows).

291 Watnick, *Proposition 12*, *supra* note 258, at 22.

292 *Id.* at 22–23.

293 Industrial Accountability and Agriculture Act of 2023, S. 272, 118th Cong. § 311(d)(2)(A) (2023).

294 Greger, *supra* note 111, at 306.

295 *Id.*

296 Smith & Zielinksi, *supra* note 49.

state legislative efforts.[297] And what was true decades ago[298] remains true today: factory farms are not likely to change until more consumers know of the conditions under which their food is raised.[299] Americans must be made aware of the issues involved in industrial animal agriculture before they can demand better conditions for animals, better treatment for the workers, and more ethically and sustainably raised food.[300] Because public opinion and sentiment are heavily influenced by the media,[301] social media campaigns, scholarly work, and other articles on the topic of eating meat can help increase public awareness and spur greater demands for changes.

As change progresses in states, corporations will thus face the trifold pressures of increasingly strict state laws, complex state-by-state compliance issues, and greater pressure from consumers. Raising awareness has proven itself a useful tool to influence consumer changes in behavior and has resulted in policy changes. For example, consumers successfully pushed their lawmakers to ban the agricultural use of Alar on apples,[302] to conduct studies on aspartame safety,[303] to change the formulation of talc-based baby powders,[304] and to remove BPA from baby bottles.[305]

In the United States, the trend toward more sustainable food and consumer products—humanely raised farm animals, in particular—is well underway. U.S. experts report that at least 23% of consumers are eating less animal flesh due to environmental and human health concerns.[306] Other studies show that 14% of consumers reduced their consumption of pork by more than half over a three year time period due

297 *See* discussion *supra* text accompanying notes 288–292 .

298 Johnny Frank, *Factory Farming: An Imminent Clash Between Animal Rights Activist and Agribusiness*, 7 B.C. ENV'T AFFS. L. REV. 423, 452–53 (1979) (noting, over 40 years ago, that "reform [to factory farming] will only result from the education of the public who, as consumers and voters, are generators of legislative change").

299 Smith & Zielinski, *supra* note 49.

300 *See* Ruben Sanchez-Sabate & Joan Sabaté, *Consumer Attitudes Towards Environmental Concerns of Meat Consumption: A Systematic Review*, INT'L J. ENV'T RSCH. & PUB. HEALTH, Apr. 2019, at 120, https://perma.cc/62PP-SV87 (noting that consumers must be aware to change their buying patterns).

301 *See* Godfray et al., *supra* note 7, at 2 (noting that social factors influence consumption).

302 Timothy Egan, *Apple Growers Bruised and Bitter After Alar Scare*, N.Y. TIMES (July 9, 1991), https://perma.cc/48ME-5H7M.

303 Carole Sugarman, *Controversy Surrounds Sweetener*, WASH. POST, D1–2 (July 3, 1983), https://perma.cc/FHC4-6WLJ (documenting how, before inclusion in soft drinks, aspartame was subject to extensive public comment which pressured the FDA to engage in further study before formal rulemaking).

304 Tiffany Hsu & Roni Caryn Rabin, *Johnson & Johnson Will Discontinue Talc-Based Baby Powder Globally in 2023*, N.Y. TIMES (Aug. 11, 2022), https://perma.cc/7FQL-KZSM (discussing pressure from 40,000 lawsuits influencing Johnson & Johnson's decision to pull baby powder from shelves).

305 Sabrina Tavernese, *F.D.A. Makes it Official: BPA Can't Be Used in Baby Bottles and Cups*, N.Y. TIMES (July 17, 2012), https://perma.cc/7WZR-6L84.

306 Justin McCarthy & Scott Dekoster, *Nearly One in Four in U.S. Have Cut Back on Eating Meat*, GALLUP (Jan. 27, 2020), https://perma.cc/227E-ABB6.

to concerns for animal welfare.[307] Concerns over the environmental and ethical impact of meat consumption have also caused producers to ramp up investment in production of meat substitutes.[308] At least one corporate research effort showed that the single most important factor to consumers in choosing sustainable products was the impact on the environment.[309] Accordingly, companies in the United States are finding that marketing their sustainability efforts is profitable and that this niche of more humanely and sustainability produced food is worth growing.[310] Major retailers now regularly carry organic milk[311] and food touted as more sustainable.[312] Walmart, for example, has recommended to its suppliers that they do not use antibiotics or battery cages for hens, or penning cages for sows.[313]

This trend is consistent with changes around the developed world. In Australia, for example, there is a movement toward more humanely raised animal flesh and producers have recognized that consumers want to see more sustainable methods of animal farming.[314] As a result, Australian producers now label their goods to show that they are delivering more ethically raised animal products in an effort to attract like-minded consumers.[315]

In Europe, consumers have used their purchasing might to demand change.[316] For example, the European Citizens' Initiative (ECI) organized a campaign to end the use of poultry and rabbit battery cages, sow stalls,

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307 Melissa McKendree et al., *Effects of Demographic Factors and Information Sources on United States Consumer Perceptions of Animal Welfare*, 92 J. ANIMAL SCI. 3161, 3164–65 (Jul. 2014), https://perma.cc/77KL-CENQ.

308 Godfray et al., *supra* note 7, at 6; Candace Croney & Janice Swanson, *Is Meat Eating Morally Defensible? Contemporary Ethical Considerations*, ANIMAL FRONTIER 13, 65 (Apr. 2023), https://perma.cc/SY7G-P578 (discussing the methods and efficacy of newly available meat substitutes in reducing overall meat consumption).

309 Elana Marmorstein, *What's Driving Consumer Demand for Sustainable Food Options at the Grocery Store?*, AYTM (Jan. 4, 2023), https://perma.cc/T6Z6-BFHX (AYTM performs surveys and builds corporate strategies).

310 *Id.*

311 *Organics at Walmart*, WAL-MART (Aug. 15, 2006), https://perma.cc/7GHT-RZT7.

312 *See Meat Department Quality Standards*, WHOLE FOODS MARKET, https://perma.cc/6DME-Z7EA (discussing animal treatment and care).

313 Hadley Malcolm, *Walmart Pushes Stricter Animal Welfare Policy*, USA TODAY (May 22, 2015), https://perma.cc/5F45-F32U (last visited Apr. 5, 2024); *see* Carrie A. Scrufari, *The Tipping Point: Can Walmart's New Animal Welfare Policy End Factory Farming?*, 6 J. AGRIC., FOOD SYS. & CMTY. DEV. 103, 104 (2016), (discussing Walmart's new animal welfare policy and its shortfalls).

314 Livia Garces de Oliveira Padiha et. al., *Sustainable Meat: Looking through the Eyes of Australian Consumers*, 13 SUSTAINABILITY, May 2021, No. 5398, at 2, https://perma.cc/9WDY-4C2X; Matthew Howden & Kirk Zammit, *United States and Australian Agriculture—A Comparison*, AUSTL. GOV'T DEP'T AGRIC. (Sept. 2019), https://perma.cc/HU26-9BSW.

315 Smith & Zielinksi, *supra* note 49.

316 Eur. Comm'n, Special Eurobarometer, *Attitudes of EU Citizens Toward Animal Welfare*, at 20, 49, Special Eurobarometer 270 (March 2007), https://perma.cc/SP8C-SAJD (analyzing European citizens' perspectives on animal welfare and its supply and demand).

sow farrowing crates, and individual calf pens.[317] In collaboration with 170 advocacy groups from twenty-eight member states, ECI collected 1.4 million signatures of support in under a year.[318] European consumers have also eschewed dairy products from cows treated with the artificial growth hormone rBGH (recombinant Bovine Growth Hormone, also known as rBST). Responding to this pressure, the European Union now bans the use of rBGH in cows in all of Europe.[319] In contrast, U.S. producers still use rBGH in milk production.[320]

International corporations such as Unilever have also responded to consumer pressure. In 2010, Unilever created its Sustainable Agriculture Code, which calls for monitoring of animal health, limiting the use of antibiotics, reducing animal mutilations, and preventing fear and distress.[321] Additionally, Unilever's Code requires appropriate protection for animals in the form of weather and indoor temperature controls.[322] The company has also adopted principles of Regenerative Agriculture that focus on delivering "positive outcomes in terms of nourishing the soil, increasing [farm] biodiversity, improving water quality and climate resilience, capturing carbon and restoring and regenerating the land."[323] These are just a few examples whereby corporations and governments have responded to consumer demand for more sustainable practices, including more humane raising, handling, and slaughtering of animals.

As more U.S. consumers realize the perils of the current animal transportation methods, they can similarly push corporate actors to encourage humane animal care and transport. Experts are aligned: animal transport without protection from the cold or in unsanitary conditions uses weakened animals as a conveyor belt for disease.[324] Consumers who become aware that animal transport law allows for these conditions and present a bio-danger to humans[325] can then demand that their lawmakers revise statutes so that, at the very least, animals do not arrive diseased or dead from freezing temperatures or extreme heat.

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317 *Questions and Answers: Commission's Response to the European Citizens 'Initiative on "End the Cage Age"*, EUR. COMM'N (June 30, 2021), https://perma.cc/ATW8-UUE3.

318 *Id.*

319 Council Decision 90/218, 1999 O.J. (L 331), 71 (EC) (concerning the placing on the market and administration of bovine somatotrophin (BST) and repealing Decision 90/218/EEC).

320 Axel Raux et al., *The Promise and Challenges of Determining Recombinant Bovine Growth Hormone in Milk*, 11 FOODS, Jan. 20, 2022, No. 274, at 1, 3, https://perma.cc/4PK8-QNU4 (discussing the prevalence of rBGH growth hormone in different countries).

321 GAIL SMITH, UNILEVER, SUSTAINABLE AGRICULTURE CODE 2017, at 21–23 (2017), https://perma.cc/A4GZ-NMGS.

322 *Id.* at 21.

323 UNILEVER, THE UNILEVER REGENERATIVE AGRICULTURE PRINCIPLES WITH IMPLEMENTATION GUIDES 6 (2021), https://perma.cc/DQ53-54PZ.

324 *See* discussion *supra* notes 245–254

325 Greger, *supra* note 111, at 301; Amanda Waxman, *Why Millions of Farm Animals Die During Live Transport*, HUMANE LEAGUE (Jan. 27, 2021), https://perma.cc/JHU2-2D3C; Sophie Kevany, *More Than 20 Million Farm Animals Die on Way to Abattoir in US Every Year*, GUARDIAN (Jun. 15, 2022), https://perma.cc/R3RS-LM6Z; *see* discussion *supra* notes 249–254.

A plausible side effect of a federal humane transportation and humane housing law for agricultural animals is that overall prices for the meat produced would increase, consumers would eat less animal meat, and corporate America might produce *less* animal meat.[326] Often touted by industry as a negative effect of more sustainable and humane animal production laws,[327] increased costs might actually be a positive effect. Bowing to price pressures, consumers might, for example, feel obliged to eat less red meat,[328] an act many experts think would reduce the incidence of heart disease and some cancers.[329] In turn, reduced production would result in the same products potentially fetching slightly higher prices, and industry could, assuming normal supply and demand, maintain its profitability.[330] Finally, in this progression, environmental and social effects from animal agricultural production would decrease and this would begin to help us tackle the social, environmental, and climate change risks associated with large scale animal agriculture.[331]

C. Litigation, Related Media, and More Sustainable Corporate Behavior

In addition to consumer purchasing pressure, litigation can also serve as a tool to attract media attention and move corporate behavior. Examples where litigation showed the business case for more sustainable corporate behavior exist in other sectors and may be drawn upon in the context of industrial animal farming. Bayer, for example, is bending to litigation pressure with regard to its pesticide Roundup, which is used by agricultural operations, homeowners, and grounds workers.[332] Based on classifications from the International Agency for Research on Cancer of the World Health Organization, plaintiffs in lawsuits against Bayer have alleged that Roundup, as formulated, is carcinogenic to humans.[333] At least four juries have heard cases and awarded large verdicts to plaintiffs

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326 Jason Karaian & Veronica Majerol, *Why Are C.E.O.s Suddenly Obsessed with "Elasticity"?*, N.Y. TIMES (Aug. 19, 2022), https://perma.cc/BR4H-Z9D8.

327 *National Pork Producers Council*, 143 S.Ct. 1142, 1144 (2023).

328 Irena Asmundson, *Supply and Demand: Why Market Tick*, INT'L MONETARY FUND, https://perma.cc/KR79-XRQ8 (last visited Feb. 16, 2024).

329 Thomas Colin Campbell, *A Plant-Based Diet and Animal Protein: Questioning Dietary Fat and Considering Animal Protein as the Main Cause of Heart Disease*, 14 J. GERIARTR CARDIOL, 331, 332–33 (2017), https://perma.cc/5JQD-D94T; Sarah C. Hull et al., *Are We What We Eat? The Moral Imperative of the Medical Profession to Promote Plant-Based Nutrition*, 188 AM. J. CARDIOLOGY 15, 18 (2022) https://perma.cc/8ZYB-CC9Y (suggesting a plant-based diet and calling this "nutrition equity").

330 Hull et al., *supra* note 329, at 18.

331 *See* Croney & Swanson, *supra* note 308, at 61 (noting the ethical and environmental concerns around meat consumption).

332 Valerie J. Watnick, *The "Roundup" Controversy: Glyphosate Litigation, Non-Hodgkin's Lymphoma, and Lessons for Toxics Regulation Going Forward*, 30 N.Y.U. ENV'T L.J. 1, 4 (2022) [hereinafter Watnick, *Roundup Litigation*].

333 WORLD HEALTH ORG., IARC MONOGRAPH ON GLYPHOSATE VOL. 112: EVALUATION OF FIVE ORGANOPHOSPHATE INSECTICIDES AND HERBICIDES (2015), https://perma.cc/872D-UBEP; *e.g.*, Hardeman v. Monsanto, 997 F.3d 941 (9th Cir. 2021).

who developed Non-Hodgkin's Lymphoma after using Roundup.[334] Bayer is even now considering a possible Bankruptcy filing seeking to reorganize over pressure related to Roundup cases.[335] Additionally, at least partially in response to numerous jury verdicts against the company,[336] Bayer agreed to change its U.S. formulation of Roundup as of 2023.[337]

In the social sustainability realm, large corporate actors have also adapted in response to litigation. For example, in *Abdullah v. Coca-Cola Co.*,[338] litigation served to bring parties to the bargaining table to discuss discrimination allegations. The parties settled the matter pursuant to an agreement dated November 16, 2000.[339] As part of the settlement, plaintiffs and the corporations agreed that Coca-Cola would adopt new "gold" standards for corporate diversity and set up a Task Force "to ensure fair, equitable, and effective implementation" of those standards for a four year period.[340] At the end of the required four years, Coca-Cola realized that its Task Force made business sense for morale and corporate culture and *voluntarily* extended its duration.[341] Indeed, research shows that social sustainability efforts matter in that a sense of inclusion and belonging leads to a more creative corporate environment and, overall, makes business sense.[342] This case is an example of how litigation and media attention can push corporate action in a socially sustainable direction that also makes business sense for the entity.

D. The Precipice of Change

Media attention, related transparency, and consumer demand will thus be the catalyst for many of the necessary changes in industrial animal agriculture. Even decades ago, one scholar writing on the animal agriculture industry presciently wrote: "reform will only result from the education of the public who, as consumers and voters, are the generators of legislative change."[343] This scholarly article—written in 1979—called

334 Watnick, *Roundup Litigation*, *supra* note 332, at 37–42; Minyvonne Burke, *Bayer Ordered to Pay $2.25B After Jury Finds Roundup Weed Killer Caused Pennsylvania Man's Cancer*, NBC NEWS (Jan. 30, 2024, 9:58 AM PST), https://perma.cc/W7TP-L5FB.

335 Jef Feeley, Tim Loh, & Crystal Tse, *Bayer Weighs 'Texas Two-Step' Bankruptcy Filing Over Roundup*, BLOOMBERG (Mar. 13, 2024), https://perma.cc/JD9C-MAE9.

336 Watnick, *Roundup Litigation*, *supra* note 332, at 37–42; https://perma.cc/5LT5-8QD9.

337 Purbita Saha, *Roundup is Finally Going to be Made Without Glyphosate in the U.S.*, POPULAR SCI. (Aug. 6, 2021), https://perma.cc/R4PY-32Z8.

338 No. 1-98-CV-3679, 1999 WL 527835 (N.D. Ga. Jul. 16, 1999).

339 Settlement Agreement, *Abdullah*, No. 1-98-CV-3679, at *3 (N.D. Ga. Nov. 16, 2000), https://perma.cc/EW3W-CWBM.

340 *Id.* at *4, *6.

341 Jennifer Maloney & Lauren Weber, *Coke's Elusive Goal: Boosting Its Black Employees*, WALL ST. J. (Dec. 16, 2020, 12:30 PM), https://perma.cc/AMN8-Y8W4.

342 Evan W. Carr et. al., *The Value of Belonging at Work*, HARV. BUS. REV. (Dec. 16, 2019), https://perma.cc/H2HQ-6XGL.

343 Frank, *supra* note 298, at 452.

for awareness of the environmental, social, and ethical problems[344] related to the animal agriculture industry and the need for changes in operations, even before the number of CAFOs grew to its current level.[345] Achieving change will not be easy, as the industrial animal agriculture lobby is firmly entrenched.[346] Big agriculture is incredibly powerful.[347] The industry operates under an existing set of laws that prevent certain disclosures,[348] and instead of requiring positive changes, lawsuits have made the industry hard to regulate.[349] For example, "ag-gag" and anti-whistleblower laws that "make taking pictures, filming, or recording on farms and livestock production facilities illegal" work to consolidate power in the animal agricultural industry[350] by aggressively preventing transparency. Right-to-farm laws likewise vary by state but generally seek to limit common-law nuisance claims against farming operations.[351]

In the federal law realm, scholars have written extensively about the inability of the federal government to regulate effectively CAFOs under the Clean Air Act[352] or the Clean Water Act.[353] In addition to those under the CWA and CAA, these passes have ranged from a failure to include *all* farm workers in the National Labor Relations Act[354] to a failure to regulate big agriculture under CERCLA.[355] It is time to end this type of "agricultural exceptionalism,"[356] whereby agribusiness gets special treatment and a pass at federal regulation.

Even though challenges exist, it seems as if we are at a distinct moment of change for big animal agriculture. Considering the U.S. Supreme Court decision upholding California's Proposition 12,[357]

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344 *See* DeGrazia, *supra* note 119, at 150–54, 160 (discussing the ethical issues involved in eating animals).

345 Frank, *supra* note 298, at 452; *see also* discussion *supra* and accompanying notes 83–84.

346 *See* discussion *supra* text accompanying notes 3–5.

347 *See* Kingery, *supra* note 4, at 647 (noting existence of "ag-gag" laws and anti-whistleblower laws); Terence J. Centner, *Governments and Unconstitutional Takings: When Do Right-to-Farm Laws Go Too Far?*, 33 B.C. ENV'T AFFS. L. REV. 87, 87–88 (2006) (describing "right-to-farm" laws protecting farming investments).

348 *See* Kingery, *supra* note 4, at 647 (noting how ag-gag laws help consolidate power).

349 Right-to-farm laws vary by state but generally seek to limit common law nuisance claims against farming operations. *See* Centner, *supra* note 347, at 88.

350 *See* Kingery, *supra* note 4, at 647.

351 Right-to-farm laws limit community lawsuits against the CAFOs even where CAFOs create terrible conditions for the communities and drive down property values. *See* Centner, *supra* note 347, at 88.

352 *See supra* text accompanying notes 192–202.

353 *See supra* text accompanying notes 145–166.

354 29 U.S.C. §§ 151–169 (1935). *See generally* Greco, *supra* note 16.

355 Michele M. Merkel, Outline of Remarks Prepared for the National Commission on Industrial Farm Animal Production Meeting, EPA and State Failures to Regulate CAFOs Under Federal Environmental Laws (Sept. 11, 2006), https://perma.cc/PM4Y-T57V. *See discussion supra* text accompanying notes 209–210.

356 *See generally* Diamond et al., *Agricultural Exceptionalism*, *supra* note 5, at 10730–45 (arguing that agriculture is in its own special regulatory class, at least in part due to consolidation of power, need for services and right-to-farm laws).

357 *Nat'l Pork Producers Council*, 143 S. Ct. 1142 (2023).

industrial animal agricultural businesses should already understand that they will not likely succeed in commerce clause challenges to state humane housing laws. High-profile media attention concerning industrial farming[358] and budding consumer pressure for sustainable products and alternatives to meat products portend that numerous factors, spurred by these external forces, are converging to cause changes in how we treat and slaughter animals. In turn, these external forces, alongside regulatory pressure, have the power to create a snowball effect—one partially driven by voluntary corporate action.

VII. CONCLUSION

Appropriate regulation, media attention, and consumer demand can help make business leaders see the economic sense of practicing more socially and environmentally sustainable animal agriculture. Writing, discussing, and advocating can spur change by altering the societal and cultural view of animals and our rights to them, highlighting significant human health issues, and improving our understanding of how big animal agriculture contributes to structural racism, climate change, and worldwide pollution. While it may sound utopian, we must begin to view farm animals with respect, change our systems to act in harmony with nature, and reduce our reliance on industrialized animal agriculture—to do any less would be to accept the environmental and social crises currently threatening our heating planet.

The reality is that crowded, inhumane factory farms subject animals and farm workers to misery on a daily basis—farm workers that are overwhelmingly marginalized persons of color. Daily incidences of cruelty on factory farms severely degrade the physical and psychological wellbeing of workers who bear witness to these practices.[359] These operations also potentially lead to greater incidences of food borne illness, antibiotic resistance, and the development of other novel pathogens that may facilitate the next pandemic or even bio-terrorism.[360] Finally, and of vital importance to the survival of the world as we know it, factory farming of animals pollutes our environment and directly contributes to climate change.[361]

For the U.S. economy to successfully turn away from industrial animal farming, corporate actors must come to recognize the "business case" for more humane and less intensive animal agriculture—albeit with the right to sell their products at a higher price. The U.S. Supreme Court's 2023 decision in the National Pork Producers Council litigation paves the way for ever increasing state regulation of industrial animal farming, regulations that will make it hard for meat producers to operate state-by-state. In the end, industry may be the entity demanding federal

358 Kristof, *supra* note 30.

359 *See* discussion *supra* text accompanying notes 78–106.

360 *See* discussion *supra* text accompanying notes 255–257.

361 *See* discussion *supra* text accompanying notes 175–184.

regulatory consistency. In this way, tighter federal regulatory controls, consumer demand, media, and corporate buy-in will coalesce to reduce the intensification of industrial animal agriculture, improve animal transport conditions, and thus reduce pollution from industrial animal production. These pressures will pave the way toward a more sustainable agricultural system—one that makes business sense for large industrial agricultural corporations—and existential sense for humans.