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Biogas Subsidies and the Increase in Consolidation on Industrial Hog Operations

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ABSTRACT

Industrial agriculture corporations operate with one goal: maximizing profits. In the name of this single objective, pig facilities fill warehouses with thousands of animals, where the costs of housing and feeding the animals can be kept as low as possible. An oft-unconsidered consequence of packing animals into warehouses is the sheer amount of waste created. Each pig creates about thirty times as much waste as a human, but industrial agriculture facilities do not have sewer systems for managing the thousands of gallons of waste produced every day. Instead, large facilities typically store their raw sewage in open air vats the size of an Olympic swimming pool. This method of waste storage produces huge amounts of greenhouse gases and poses a significant threat to the health of workers and people living near the industrial facilities. In recent years, large farms have started implementing anaerobic digester systems to store the animal waste. In these systems, organic matter is broken down to create energy, which facilities can profit from through government subsidies and through various "cap and trade" programs. Though the industry advertises this energy as a green or renewable energy source, this article explores why "biogas" is not a viable solution to the problem

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of industrial agriculture waste, and why taxpayer dollars should not be spent on the biogas industry.

INTRODUCTION

Our nation's farmed animals are in crisis, and the factory farm system is to blame. Over 10 billion animals are killed in the United States every year for food, and in the United States, 99% of these animals are raised on factory farms.[1] Factory farms, or concentrated animal feeding operations (CAFOs), are a form of intensive animal agriculture that maximizes corporate profits by using as few resources as possible.[2] In the name of profit, these mega farms subject farmed animals to constant and prolonged cruelty, treating animals as a mere economic product rather than living, sentient beings that experience suffering and feel pain.[3] Factory farms confine thousands of animals together into windowless warehouses, where most animals go their entire lives without experiencing even the most basic and fundamental animal experiences: breathing fresh air, feeling the grass, or seeing the

1. Cheryl Leahy, *Do Animal Protection Laws Address Widespread Cruelty? Unique Challenges and Potential for Addressing Institutional Abuse to Farmed Animals*, 32 S. CAL. REV. L. & SOC. JUST. 133, 145 (2023); Jacy Reese Anthis, *US Factory Farming Estimates*, SENTIENCE INST. (Nov. 2, 2024), https://www.sentienceinstitute.org/us-factory-farming-estimates [https://perma.cc/9QD4-NHDR]. From 2012 to 2017, there were 190 million more animals on factory farms, a 14% increase. FOOD & WATER WATCH, FACTORY FARM NATION: 2020 EDITION 1 (2020), https://www.foodandwaterwatch.org/wp-content/uploads/2021/03/ib_2004_updfacfarmmaps-web2.pdf [https://perma.cc/HY75-QBJN].

2. *Factory Farming: What It Is and Why It's a Problem*, THE HUMANE LEAGUE, https://thehumaneleague.org/article/what-is-factory-farming [https://perma.cc/Y29C-2DL7] (Nov. 11, 2022). This Note will use the terms factory farms and CAFOs interchangeably, as is common in animal law writing. *See, e.g.*, Helena Masiello, *CAFO's Are a Public Health Crisis: The Creation of COVID-19*, 76 U. MIAMI L. REV. 900, 902 (2022). This is distinguished from the Environmental Protection Agency's (EPA) definition of CAFO, because under the Clean Water Act, the EPA applies specific legal requirements that must be met for a farm to qualify as a CAFO. 40 C.F.R. § 122.23 (2012). According to the EPA, large CAFOs are those that house either 700 dairy cows, 1,000 veal calves, 2,500 swine, or 125,000 chickens. *Id.* § 112.23(b)(4). Medium CAFOs confine over 200 dairy cows, 300 veal calves, 750 swine, or 37,500 chickens. *Id.* § 112.23(b)(6).

3. *See generally* Leahy, *supra* note 1 (discussing at length the cruel practices common to the animal agriculture industry); *Factory Farming: What It Is and Why It's a Problem*, *supra* note 2 (providing a thorough analysis on the cruel practices of chicken debeaking, tail docking for cows and pigs, animal confinement, and genetic manipulation); *Farmed Animals*, ANIMAL LEGAL DEF. FUND, https://aldf.org/focus_area/farmed-animals/ [https://perma.cc/JQ9W-5YHE] (listing common cruel practices); Amy Mosel, Comment, *What About Wilbur? Proposing a Federal Statute to Provide Minimum Humane Living Conditions for Farm Animals Raised for Food Production*, 27 U. DAYTON L. REV. 133 (2001).

sun.[4] This cruel treatment is not just at a few so-called "bad farms"—it is endemic to the industry.[5]

When given the opportunity to live outside of the confines of a warehouse, pigs are incredibly intelligent, social animals.[6] Studies have shown that pigs are smarter than dogs and have the intelligence level of a young child.[7] Pigs form family groups in which they are very affectionate with one another, and they like to play and forage for their food.[8]

In factory farms pigs are not able to express any of these natural behaviors. Pregnant sows are confined in crates so small that they cannot move or turn around.[9] They have no hay or bedding, and the

4. Mosel, *supra* note 3, at 136 ("These sad creatures live out their lives packed together by the thousands, confined in unacceptable living spaces without room to even comfortably turn their bodies or lie down. They are often kept in perpetual darkness, drugged and subjected to painful body alterations without anesthetics." (footnote omitted)).

5. Cheryl L. Leahy, *Large-Scale Farmed Animal Abuse and Neglect: Law and Its Enforcement*, 4 J. ANIMAL L. & ETHICS 63, 65 (2011) ("The treatment of factory farmed animals causes some of the most acute suffering, causes suffering over prolonged periods of time, and is inflicted on these animals as part of the inherent nature of the system.").

6. *See generally*, Lori Marino & Christina M. Colvin, *Thinking Pigs: A Comparative Review of Cognition, Emotion, and Personality in* Sus Domesticus, *in* 28 INT'L J. COMPAR. PSYCH.(Heather M. Hill. ed. 2015).

7. *Id.* at 18 ("In this paper we have identified a number of findings from studies of pig cognition, emotion, and behavior which suggest that pigs possess complex ethological traits similar, but not identical, to dogs and chimpanzees."); LORI MARINO & CHRISTINA M. COLVIN, WELLBEING INT'L, THINKING PIGS: COGNITION, EMOTION, AND PERSONALITY 19–20 (2016), https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1000&context=mammal [https://perma.cc/FJZ5-CUB3] (noting that pigs show self-awareness, form likes and dislikes, enjoy creative play, and experience emotions not unlike those of a human).

8. Ardyn Cieslak & Jennifer Mishler, *Six Ways Pigs Are Just Like Dogs*, FARM SANCTUARY (Dec. 17, 2023), https://www.farmsanctuary.org/news-stories/6-ways-pigs-are-like-dogs/ [https://perma.cc/6RTS-YRHS]; Merete Studnitz, Margit Bak Jensen & Lene Juul Pedersen, *Why Do Pigs Root and in What Will They Root? A Review on the Exploratory Behaviour of Pigs in Relation to Environmental Enrichment*, 107 APPLIED ANIMAL BEHAV. SCI. 183, 184–85 (2007) (finding that rooting behavior appears to be an important part of a pigs natural behaviors and that it is a rewarding experience and perhaps a behavioral need for the animal. Under semi-natural conditions, pigs spend 20–50% of their active time rooting).

9. Nat'l Pork Producers Council v. Ross, 143 S. Ct. 1142, 1150–51 (2023); Lee L. Schulz & Glynn T. Tonsor, *The U.S. Gestation Stall Debate*, *in* 30 CHOICES, no. 1, 2015, at 1 (2015). These crates are called "gestation crates," and have recently been the topic of a significant Supreme Court decision. *Ross*, 143 S. Ct. at 1149. California passed Proposition 12, which banned the use of gestation crates within the state of California and banned the sale of pork which had been raised in facilities anywhere in the United

floors of the crates are slatted so that urine and feces can fall through into vats below.[10] The lack of mental stimulation or ability to express natural behaviors leaves pigs depressed, and many display neurotic behaviors like chewing on the bars of their crates and causing self-inflicted injuries.[11] Imagine how your dog would behave if it was left in a kennel, barely larger than its body, for twenty-four hours a day for the entirety of its life.

On top of this mental abuse, pigs experience severe physical abuse in CAFOs.[12] Farmers cut piglets' tails off with pliers and castrate them with rudimentary tools, all without anesthesia.[13] Undercover videos taken from within factory farms document this process, showing piglets screaming and trying to escape as farm workers cut an incision and rip out the piglets testicles by hand.[14] Activists working undercover have also documented farmers killing sick piglets by slamming their heads on the floor or on walls.[15] Mother pigs often suffer from a prolapse, a severe medical emergency where organs

States that use gestation crates. CAL. HEALTH & SAFETY. CODE § 25990(b)(2) (West 2024). Plaintiffs National Pork Producers Council challenged this law under the dormant commerce clause, arguing that they had no way of knowing which pigs, when slaughtered, would ultimately end up in California, and thus the state is imposing an undue burden on interstate commerce. *Ross*, 143 S. Ct. at 1153–54. The Supreme Court upheld the law, and animal activists are hopeful that the Proposition will decrease the use of gestation crates across the United States. CTR. FOR ANIMAL WELFARE AT U.C. DAVIS, CALIFORNIA PROPOSITION 12, THE FARM ANIMAL CONFINEMENT INITIATIVE: FAQS ABOUT PIGS 2, https://animalwelfare.ucdavis.edu/uploads/6/3/7/0/63703691/prop_12_faq_swine.pdf [https://perma.cc/NTU8-V3DH] ("According to the 2012 USDA NAHMS Swine Survey, 76.8% of large-herd sows are housed in total confinement gestation crates in the U.S., but with new legislative and food company pressure, this proportion is expected to decrease.").

10. *Inhumane Practices on Factory Farms*, ANIMAL WELFARE INST., https://awionline.org/content/inhumane-practices-factory-farms [https://perma.cc/D6XN-JZET].

11. *The Heartbreaking Life of a Factory-Farmed Mother Pig*, WORLD ANIMAL PROT. (Feb. 1, 2018), https://www.worldanimalprotection.org.nz/news/heartbreaking-life-factory-farmed-mother-pig [https://perma.cc/MRD5-PJ2R] ("In these cages, mother pigs live their whole lives unable to express natural behaviours, forage, or socialise with other pigs. They are kept alone in cages. They experience lameness, intense stress, self-inflicted injury and depression. This is no life for a pig.").

12. *Id.*

13. Amanda Waxman, *6 Cruel Ways That Pigs Are Abused on Factory Farms*, THE HUMANE LEAGUE (Nov. 10, 2020), https://thehumaneleague.org/article/factory-farmed-pigs [https://perma.cc/4X9B-K34N].

14. Bryony Jewell, *Shocking Undercover Footage at Tennessee Pig Farm Reveals How Animals Are Left Trapped, Piglets Are Smashed Against the Ground to Kill Them and Their Testicles Are Cruelly Removed*, DAILY MAIL (Nov. 12, 2018), https://www.dailymail.co.uk/news/article-6379847/Shocking-undercover-footage-Tennessee-pig-farm-reveals-animals-treated.html [https://perma.cc/Q3M6-82N9].

15. *Id.*

protrude from the anus or vulva, and receive no veterinary treatment; instead, the animal lives in agony until she is eventually euthanized.[16] Graphic undercover videos from factory farms have even shown dead piglet intestines being cut out of their body, blended into a slurry, mixed with feces, and fed to mother pigs.[17] Pigs on factory farms are subject to a life of torture—all for the sake of maximizing profits.

Because the CAFO model allows corporations to grow pigs cheaply, farms that practiced more sustainable or humane methods were left unable to compete in the new industry.[18] For example, in Iowa, the nation's largest pig producing state, the number of pigs on factory farms between 1982 and 2007 multiplied by ten.[19] In that same time period, the number of smaller pig farms in Iowa dropped by more than 80%, and the state lost over 40% of all farm jobs.[20] The CAFO model flooded the market with cheap meat, forcing small farms to join a factory farm or exit the industry.[21]

For decades, advocates from various disciplines have called for government involvement in shifting animal agriculture away from factory farms to protect animals, the environment, and the public

16. Twilight Greenaway, *'We've Bred Them to Their Limit': Death Rates Surge for Female Pigs in the U.S.*, GUARDIAN (Oct. 1, 2018, 2:00 PM), https://www.theguardian.com/environment/2018/oct/01/death-rates-surge-female-pigs-us [https://perma.cc/C7YP-NKJJ]. Rates of prolapses for mother pigs have skyrocketed in the past few years because pigs have been selectively bred to have unnaturally large litters, which puts extreme stress on the mother's body. *Id.* On some farms, prolapse causes 25–50% of pig deaths. *Id.*

17. Kenny Torrella, *A New Investigation Exposes the Stomach-Churning Practice That Goes into Making Your Bacon*, VOX (Aug. 14, 2023, 2:20 PM), https://www.vox.com/future-perfect/23817808/pig-farm-investigation-feedback-immunity-feces-intestines [https://perma.cc/8PG4-S55J].

18. *See* Melanie J. Wender, *Goodbye Family Farms and Hello Agribusiness: The Story of How Agricultural Policy is Destroying the Family Farm and the Environment*, 22 VILL. ENV'T. L.J. 141, 144–48 (providing a thorough analysis of the rise of factory farms and how they pushed out the family farm).

19. FOOD & WATER WATCH, *supra* note 1, at 7.

20. *Id.* The loss of jobs is especially detrimental to farmers because they are typically in rural communities where there are very few other job opportunities. Alana Semuels, '*They're Trying to Wipe Us off the Map.' Small American Farmers Are Nearing Extinction*, TIME (Nov. 27, 2019, 1:16 PM), https://time.com/5736789/small-american-farmers-debt-crisis-extinction/ [https://perma.cc/FG8Z-QVQM] ("Prices are so low that farmers like the Rieckmanns are trying to figure out other ways to come up with the money to keep their farm going. But like many other rural areas . . . their town of Fremont does not have a bustling economy.").

21. Semuels, *supra* note 20.

health.[22] However, instead of heeding these calls, the United States government is now directly involved in encouraging further consolidation of the industry, especially the pig and dairy industries, by subsidizing "biogas" collected by factory farms.[23] Biogas is energy produced by breaking down organic material, such as animal waste, through anaerobic digestion.[24] Anaerobic digester systems are installed on factory farms in order to collect the methane that is produced from animal waste.[25] These systems use bacteria to digest the animal waste and produce natural gas, which factory farms can profit from either through government subsidies or by the "cap and trade" system.[26]

This Note analyzes the two ways in which biogas subsidies will increase concentration on pig farms: (1) biogas subsidies incentivize farms that implement anaerobic digester systems to further increase the number of pigs on their farms and (2) biogas subsidies increase the market power of the largest corporations, leaving non-CAFO farms unable to compete. Part I outlines the history that led to factory farms and why increased concentration in the hog industry is detrimental to

22. *See generally* Nicole Fox, Note, *The Inadequate Protection of Animals Against Cruel Animal Husbandry Practices Under United States Law*, 17 WHITTIER L. REV. 145 (1995); Barbara O'Brien, Comment, *Animal Welfare Reform and the Magic Bullet: The Use and Abuse of Subtherapeutic Doses of Antibiotics in Livestock*, 67 U. COLO. L. REV. 407 (1996); Steven J. Havercamp, Note, *Are Moderate Animal Welfare Laws and a Sustainable Agricultural Economy Mutually Exclusive? Laws, Moral Implications, and Recommendations*, 46 DRAKE L. REV. 645 (1998).

23. *See* RUTHIE LAZENBY, CTR. FOR AGRIC. & FOOD SYS., RETHINKING MANURE BIOGAS: POLICY CONSIDERATIONS TO PROMOTE EQUITY AND PROTECT THE CLIMATE AND ENVIRONMENT 5–6 (2022).

24. *Biogas: Converting Waste to Energy*, ENV'T & ENERGY STUDY INST. (Oct. 3, 2017), https://www.eesi.org/papers/view/fact-sheet-biogasconverting-waste-to-energy [https://perma.cc/DE4P-3QYY]. Animal waste is not the most efficient organic material to use for anaerobic digestion. *Id.* "Food waste, fats, oils, and greases are the easiest organic wastes to break down, while livestock waste tends to be the most difficult." *Id.*

25. *Id.* Anaerobic digesters do not come close to capturing all the methane produced through animal agriculture. LAZENBY, *supra* note 23, at 5. For example, on dairy farms anaerobic digesters only collect the methane from the cow waste. *Id.* However, a significant portion of methane released by cows comes from enteric fermentation, where methane is released as a by-product of the cow's digestive process. U.S. ENV'T PROT. AGENCY, EPA 430-R-24-004, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990–2019, at 5-1 fig.5-1 (2024).

26. U.S. DEP'T OF AGRIC., U.S. ENV'T PROT. AGENCY, & U.S. DEP'T OF ENERGY, BIOGAS OPPORTUNITIES ROADMAP 6, 7 fig.1 (2014); *see also* LAZENBY, *supra* note 23, at 9–14 (noting both federal and state programs that support manure biogas, including federal grants to fund the construction of biogas systems, and state and federal subsidies for biogas production on an ongoing basis).

both human and non-human animals.[27] Part II examines the current state of pig agriculture today and the role that biogas subsidies will play.[28] Part III analyzes how the legal systems have supported the growth of CAFOs and why taxpayer dollars should not be spent on the biogas industry.[29]

I. BACKGROUND

The United States has already seen how agricultural subsidies increase concentration in animal agriculture.[30] In fact, the rise of factory farms is a direct result of the government subsidies provided in the Agricultural Adjustment Act of 1933.[31] By subsidizing crops like corn and soy, the government paid farmers to sell crops below the cost of production.[32] Additionally, farmers were paid to overproduce corn and soy, and they sold the surplus at huge discounts to the animal agriculture industry to be used as animal feed.[33] Cheap corn and soy led to the first feedlot in the 1960s: instead of animals being free to graze on grass, animals were confined to a small area and fed a diet of corn, soy, and meat scraps.[34] Crop subsidies aimed to stabilize the

27. *See infra* Part I.

28. *See infra* Part II.

29. *See infra* Part III.

30. Trevor J. Smith, *Corn, Cows, and Climate Change: How Federal Agricultural Subsidies Enable Factory Farming and Exacerbate U.S. Greenhouse Gas Emissions*, 9 WASH. J. ENV'T. L. & POL'Y 26, 36 (2019) ("[S]ome of the primary enablers of factory farming are federal agricultural support programs for commodity crops, based on the Farm Bill.").

31. Wender, *supra* note 18, at 145–46, 154. The 1933 Agriculture Adjustment Act was enacted to stabilize crop prices and utilize surplus to combat widespread hunger resulting from the Great Depression. *Id.* at 145. Under this system, if crop prices fell below a certain point, farmers were paid a loan to cover the cost of crops rather than selling them in the already weak market. *Id.* at 145–46. "These subsidy payments push crop prices down, making the cost to grow the crops higher than the cost to purchase them." *Id.* at 154.

32. *Id.*

33. *Id.*

34. Wender, *supra* note 18, at 153–54. The struggles that small farms face in animal agriculture are mirrored in the crop industry because of these Farm Bill subsidies. *Id.* at 143–44. Five crops are the most heavily subsidized: corn, cotton, rice, soybeans, and wheat, and these five crops are controlled by large corporations. *Id.* at 144. "This subsidy program has 'snowballed into a legislative package of subsidized

market and help crop farmers, but livestock farmers also indirectly benefited when they received very cheap animal feed. Also, crop subsidies led farmers to switch from pasture raised animals to the more financially efficient model of factory farming.[35]

Corn and soy subsidies encouraged the growth of concentrated hog operations, but independent farms still largely dominated the industry throughout the 1960s.[36] However, in the 1970s, in response to an unprecedented spike in food prices, the federal government prioritized efficiency in farming over all else.[37] United States Secretary of Agriculture Earl Butz encouraged the development of mega farming operations with the mantra "get big or get out."[38] Butz created new deficiency payments, which were directly linked to the farmer's yield.[39] The deficiency payments disproportionately aided larger farms because the more the farmer produced, the more subsidies he received.[40] Butz's impact still resonates today; in 1987, there was an

commodities that increasingly benefit[] the largest of agricultural producers.'" *Id.* (quoting William S. Eubanks III, *The Sustainable Farm Bill: A Proposal for Permanent Environmental Change*, 39 ENV'T L. REP. 10493, 10495 (2009)). The family farmers that receive no assistance through subsidies are left "to struggle to survive." *Id.* Learning nothing from its past, the United States pushes forward with more corporation-assisting programs while leaving small farms in the dust. Lisa Held, *Are Biogas Subsidies Benefitting the Largest Industrial Animal Farms?*, CIV. EATS (Sept. 20, 2021), https://civileats.com/2021/09/20/are-biogas-subsidies-benefiting-the-largest-industrial-animal-farms/ [https://perma.cc/94ZZ-GNGQ].

35. Wender, *supra* note 18, at 154.

36. *See* Eliza MacLean, *American Agricultural Policy: How Food Shaped the United States*, U.S. HIST. SCENE, https://ushistoryscene.com/article/ag-policy/ [https://perma.cc/YG3T-NYHA].

37. *Id.*; Chris McGreal, *How America's Food Giants Swallowed the Family Farms*, GUARDIAN (Mar. 9, 2019, 11:30 AM), https://www.theguardian.com/environment/2019/mar/09/american-food-giants-swallow-the-family-farms-iowa [https://perma.cc/5NCW-MYK6].

38. McGreal, *supra* note 37. Sonny Purdue, the agriculture secretary under President Trump, relayed the same sentiment at the World Dairy Expo in 2019, saying "[i]n America, the big get bigger and the small go out." Semuels, *supra* note 20.

39. Jodi Soyars Windham, *Putting Your Money Where Your Mouth Is: Perverse Food Subsidies, Social Responsibility & America's 2007 Farm Bill*, 31 ENVIRONS: ENV'T. L. & POL'Y J. 1, 10 (2007).

40. *Id.* Additionally, the new deficiency payments "gave farmers 'little incentive to rotate subsidiarized crops with grass, alfalfa, or other soil-conserving uses; rather they are strongly encouraged to maintain their base acreage' of cropland on which their eligibility for future payments is calculated" *Id.* (quoting CLIVE POTTER, AGAINST THE GRAIN: AGRI-ENVIRONMENTAL REFORM IN THE UNITED STATES AND EUROPEAN UNION 10 (1998)).

average of 1,200 pigs per farm.[41] By 2017, that number skyrocketed to an average of 51,300 pigs per farm.[42]

Though CAFOs tout that they are the most economically viable model, CAFOs would not be sustainable if they bore the actual cost of production.[43] CAFOs depend on the cheap feed they receive through government subsidies and the exemptions from environmental laws carved out by U.S. agricultural policy.[44] Without these two cost-saving measures, CAFOs would not be economically sustainable.[45]

Because CAFOs implicate significant public health concerns, the harm caused by consolidation in the hog industry extends to humans as well.[46] It is impossible to discuss the suffering caused by CAFOs without discussing the massive environmental effects of factory farming.[47] The United Nations Food and Agriculture Organization estimates that animal agriculture is responsible for 14.5% of all greenhouse gas emissions.[48] Research demonstrates that even if fossil

41. James M. MacDonald, *Consolidation in U.S. Agriculture Continues*, U.S. DEP'T. OF AGRIC. (Feb. 3, 2020), https://www.ers.usda.gov/amber-waves/2020/february/consolidation-in-u-s-agriculture-continues/ [https://perma.cc/79UH-9X66].

42. *Id.* Today, the United States Department of Agriculture (USDA) still "proudly proclaim[s] that ninety-seven percent of all U.S. farms are family-owned." Michelle Johnson-Weider, *From Factory Farming to a Sustainable Food System: A Legislative Approach*, 32 GEO. ENVT'L. L. REV. 685, 691 (2020). That statistic hardly represents the whole picture: more than half of all vegetable and dairy sales come from 3% of farms, and 1% of farms account for 35% of all sales. *Id.*

43. Johnson-Weider, *supra* note 42, at 693–94.

44. *Id.* at 694–95.

45. *Id.* at 694.

46. *See generally* Adam Scott Carlesco, *The Sidestepping of National Pollution Discharge Elimination System Permitting Requirements by Concentrated Animal Feeding Operations*, 5 J. ANIMAL & ENV'T L. 43 (2014).

47. *See generally id.*; Nicole G. Di Camillo, *Methane Digesters and Biogas Recovery – Masking the Environmental Consequences of Industrial Concentrated Livestock Production*, 29 UCLA J. ENV'T. L. & POL'Y 365 (2011).

48. FOOD & AGRIC. ORG. OF THE U.N., LIVESTOCK SOLUTIONS FOR CLIMATE CHANGE (2017). Interestingly, climate policy has long been focused on reducing the amount of greenhouse gases, but has largely ignored animal agriculture, one of the highest polluting industries. Ryan Levandowski, Note, *Polluting 'til the Cows Come Home: How Agricultural Exceptionalism Allows CAFOs Free Range for Climate Harm*, 33 GEO. ENV'T L. REV. 151, 153 (2020) ("Whereas much of the climate policy in the United States has been focused on reducing carbon dioxide ('CO_2') emissions from fossil fuel consumption, relatively little attention has been paid to the livestock sector despite its standing as a significant national contributor of greenhouse gases."). Levandowski explains this phenomenon is a result

fuel emissions were eliminated, emissions from the agriculture system alone would preclude us from meeting the Paris Climate Agreement goal of limiting warming to 1.5ºC.[49] Aside from climate change impacts, CAFOs also raise immediate public health risks as well.

For example, in the wake of the COVID-19 pandemic, scientists have expressed concerns about factory farms, especially pig farms, because they are the perfect breeding ground for a new pandemic.[50] With thousands of pigs crammed into single warehouses, transmission of pathogens between pigs is easy and rapid.[51] Further, the stressful environment of CAFOs depress the pigs' immune systems, making them more susceptible to illness.[52] The more concentrated the CAFO, the more danger it poses to humans because "[l]arger . . . animal population sizes and densities of factory farms facilitate greater transmission and recurrent infection."[53] Further, humans interact in close quarters with these animals, allowing for easy transmission from infected pig to human.[54]

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of "agricultural exceptionalism," where the belief that agriculture is "so essential to human survival that farmers should be entitled to exceptional legal and regulatory protections . . . ." *Id.* This agricultural exceptionalism can be seen in every state's "right to farm" laws, where farmers are legally protected from nuisance lawsuits resulting from their operations. Alexandra Lizano & Rusty Rumley, *Right to Farm*, THE NAT'L AGRIC. L. CTR., https://nationalaglawcenter.org/state-compilations/righttofarmoverview/ [https://perma.cc/W5M5-XLKG].

49. Michael A. Clark, Nina G. G. Domingo, Kimberly Colgan, Sumil K. Thakrar, David Tilman, John Lynch, Ines L. Azevedo & Jason D. Hill, *Global Food System Emissions Could Preclude Achieving the 1.5º and 2º C Climate Change Targets*, 370 SCI. MAG. 705, 705. (2020), https://www.science.org/doi/epdf/10.1126/science.aba7357 [https://perma.cc/V9MD-PRAM].

50. Rebecca K. McLean & Simon P. Graham, *The Pig as an Amplifying Host for New and Emerging Zoonotic Viruses*, *in* 14 ONE HEALTH at 2 (2022), https://pmc.ncbi.nlm.nih.gov/articles/PMC8975596/pdf/main.pdf [https://perma.cc/VA9D-D7BE].

51. Rob Wallace, Alex Liebman, Luis Fernando Chaves & Rodrick Wallace, *COVID-19 and Circuits of Capital: New York to China and Back*, 72 MONTHLY REV., May 2020, at 1, 8, https://fighttowin.noblogs.org/files/2020/06/Rob-Wallace-et-al.-COVID-19-and-Circuits-of-Capital.pdf [https://perma.cc/REF7-9Q97].

52. *Id.*

53. *Id.*

54. *Id.* There are at least 30 viral or bacterial diseases that we know of that can be transmitted from pig to humans. *Feral Swine Damage: Pets and People*, ANIMAL & PLANT HEALTH INSPECTION SERV., U.S. DEP'T. OF AGRIC. (Mar. 30, 2024), https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/operational-activities/feral-swine/feral-

Additionally, according to the American Medical Association, the rise in antimicrobial resistant bacteria in the United States is attributable to substandard practices on factory farms.[55] The conditions on CAFOs deplete the animal's immune system, so CAFOs give farmed animals antibiotics preventatively as an easy and cost effective way to make sure animals are just healthy enough to survive until slaughter.[56] CAFOs routinely add antibiotics into animal feed and water, whether or not the animal is ill.[57] This use of antibiotics is massive: approximately 80% of all antibiotics sold in the United States are given to farmed animals.[58] The constant exposure of antibiotics leads to antimicrobial resistance in farmed animals, and as humans consume this meat, they too are exposed to low doses of antibiotics, developing antimicrobial resistance as well.[59] Additionally, animals develop antimicrobial resistant infections, which can be spread to humans who consume meat containing this bacteria.[60] Antimicrobial resistance in humans is a rapidly growing problem: the World Health Organization calls antimicrobial resistance "one of the top global public health and development threats."[61] In the United States, nearly 3 million infections occur each year, resulting in 35,000 deaths and 1.27 million worldwide.[62] Scientists predict that by 2050 the number of global deaths caused by antimicrobial resistance could reach 10

swine-damage/feral-swine-risks-pets-people [https://perma.cc/E7KA-YZTM]. Further, there is always the risk that a disease which has not previously been transmitted to humans mutates and becomes transmissible, as we saw with the H1N1 virus in 2009. Talha N. Jilani, Radia T. Jamil, Andrew D. Nguyen & Abdul H. Siddiqui, *H1N1 Influenza*, NAT'L CTR. FOR BIOTECHNOLOGY INFO. (Mar. 4, 2024), https://www.ncbi.nlm.nih.gov/books/NBK513241/ [https://perma.cc/K4LM-ZHAU].

55. Amanda Belanger, *A Holistic Solution for Antibiotic Resistance: Phasing out Factory Farms in Order to Protect Human Health*, 11 J. HEALTH & BIOMEDICAL L. 145, 163 (2015).

56. *Id.* at 162.

57. Grace Hussain, *How Do Factory Farms Use Antibiotics?*, SENTIENT MEDIA (Mar. 15, 2023), https://sentientmedia.org/antibiotic-use-factory-farms [https://perma.cc/2DWA-H9YL].

58. Belanger, *supra* note 55, at 145.

59. Hussain, *supra* note 57.

60. *Id.*

61. *Antimicrobial Resistance*, WORLD HEALTH ORG. (Nov. 21, 2023), https://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance [https://perma.cc/Y43T-NNJV].

62. *Antimicrobial Resistance Facts and Stats*, CTRS. FOR DISEASE CONTROL & PREVENTION (July 16, 2024), https://www.cdc.gov/antimicrobial-resistance/data-research/facts-stats/index.html [https://perma.cc/LUW3-HYP3].

million and result in an additional health care cost of 1 trillion in the United States.[63]

Finally, CAFOs pose a major health risk to the communities around them, which are disproportionately low-income, minority communities.[64] Factory farms produce millions of gallons of manure, which is stored in a liquid form in open pits and can be just yards away from residential homes.[65] The manure pits are so incredibly toxic that there are multiple instances of workers who entered lagoons to make repairs and were killed from exposure to the toxic waste.[66] The quality of life for community residents near these pits is destroyed: their property values tank, and the horrible odors make it impossible to enjoy time outside or even open their windows.[67] The problem is not merely foul odors—exposure to this toxic air leaves residents with nausea, eye irritation, burning throat, difficulty breathing, and increased anxiety and depression.[68] These symptoms have been connected to the ammonia and hydrogen sulfide released into the air

63. Christopher J. L. Murray, Kevin Shunji Ikuta, Fablina Sharara, Lucien Swetschinski, Gisela Robles Aguilar, Authia Gray, Chieh Han, Catherine Bisignano et al., *Global Burden of Bacterial Antimicrobial Resistance in 2019: A Systematic Analysis*, 399 LANCET 629, 630 (2022); *Antimicrobial Resistance*, *supra* note 61.

64. Wendee Nicole, *CAFOs and Environmental Justice: The Case of North Carolina*, 121 ENV'T HEALTH PERSPS. A182, A183 (2013), https://ehp.niehs.nih.gov/doi/epdf/10.1289/ehp.121-a182 [https://perma.cc/W2PP-EC4R]. The correlation between CAFO location and minority communities is called environmental racism. *Id.* It does not necessarily imply malicious intent, but rather that agriculture companies followed the "path of least resistance," and chose sites where the land was cheap, and they felt people were less likely to object. *Id.* "[H]undreds of studies have documented disparities in the location of environmental hazards relative to race and class . . . ." *Id.*

65. *Id.* at A183, A185.

66. Christine Ball-Blakely, *CAFOs: Plaguing North Carolina Communities of Color*, 18 SUSTAINABLE DEV. L. & POL'Y 4, 6 (2017); *see also* NAT'L INST. OF OCCUPATIONAL SAFETY & HEALTH, NIOSH-93-114, MANURE PITS CONTINUE TO CLAIM LIVES 1 (1993), https://nasdonline.org/static_content/documents/1186/d001028.pdf [https://perma.cc/6LPU-72VL]. NIOSH posted this alert to inform farmers of the risks of the toxic waste pits, alerting them to never enter manure pits. *Id.* The alert provided details on a particularly tragic incident, where a worker entered a manure pit to make repairs but was overcome by the toxic fumes and fell off the ladder. *Id.* The employee's 15-year-old nephew tried to rescue him when he too was overcome and collapsed into the pit. *Id.* The young man's father, cousin, grandfather, and farm owner each entered the pit to try to rescue him and his uncle, and tragically all five died. *Id.*

67. Nicole, *supra* note 64, at A187; Ball-Blakely, *supra* note 66, at 6 ("One study found that properties within three miles of a CAFO decreased in value by 6.6% on account of the CAFO, while properties within one-tenth of a mile of a CAFO decreased in value by as much as 88%.").

68. Nicole, *supra* note 64, at A187.

through the waste pits.[69] Additionally, surrounding communities are not only exposed to toxic chemicals through the air, but also through water and soil contamination.[70] Studies have shown that communities surrounding CAFOs experience greater rates of "respiratory and gastrointestinal ailments than neighbors of other types of farms and non-livestock areas," and contaminated water causes symptoms such as "'nausea, vomiting, fever, diarrhea, muscle pain, death,' and kidney failure."[71]

CAFOs are incredibly destructive to the environment, animal welfare, and public health, yet through public subsidies for biogas digesters, the public is forced to pay into a system that harms them. Biogas subsidies will only serve to exacerbate these problems, providing CAFOs with even more revenue.[72] In an industry that is already rapidly consolidating, farms will be encouraged to increase their herd size, no matter the impact on human and non-human animals.[73] Accordingly, taxpayer funding should no longer be used to subsidize biogas infrastructure, which will incentivize the continuation of CAFO's destructive practices.

69. Ball-Blakely, *supra* note 66, at 6.

70. Nicole, *supra* note 64, at A168. A study of communities located near factory farms found that residents are "chronically exposed to contaminants from land-applied wastes and their overland flows, leaking lagoons, and pit-buried carcasses, as well as airborne emissions, resulting in higher risks of certain diseases" such as bacterial infections, respiratory and neurological disorders, depression and kidney disease. Phoebe Gittelson, Danielle Diamond, Lynn Henning, Maria Payan, Lynn Utesch & Nancy Utesch, *The False Promises of Biogas: Why Biogas Is an Environmental Justice Issue*, 15 ENV'T JUST. 352, 356–57 (2022).

71. Ball-Blakely, *supra* note 66, at 5–6 (first quoting Sarah C. Wilson, Comment, *Hogwash! Why Industrial Animal Agriculture Is Not Beyond the Scope of Clean Air Act Regulation*, 24 PACE ENV'T L. REV. 439, 445 (2007), then quoting CARRIE HRIBAR, NAT'L ASS'N OF LOC. BDS. OF HEALTH, UNDERSTANDING CONCENTRATED ANIMAL FEEDING OPERATIONS AND THEIR IMPACT ON COMMUNITIES 10 (2010)); *see generally* Kelley J. Donham, Steven Wing, David Osterberg, Jan L. Flora, Carol Hodne, Kendall M. Thu & Peter S. Thorne, *Community Health and Socioeconomic Issues Surrounding Concentrated Animal Feeding Operations*, 115 ENV'T HEALTH PERSPS. 317 (2006) (providing a thorough overview of recent studies analyzing the health and socioeconomic issues surrounding CAFOs and finding that health issues resulting from exposure to hydrogen sulfide and other toxins severely impact both workers and surrounding communities).

72. Di Camillo, *supra* note 47, at 376 ("Given the large expense associated with digester set-up, large, well-endowed livestock production facilities maintain a financial advantage over smaller facilities. Only large facilities are able to shoulder the cost of digester systems—in addition to which, digester systems are really only effective at very large scale livestock operations, given the need for large quantities of manure.").

73. LAZENBY, *supra* note 23, at 24–25.

II. ANALYSIS

A. Current State of the Hog Industry

Today, the pig industry is more concentrated than ever before: the largest facilities raise 93% of the nation's pigs, and smaller independent farms continue to be pushed out of the industry.[74] As one Iowa farmer explained, "[i]n the past 20 years, where I am, independent hog farming just silently disappeared as the corporates came in."[75] In 1994, there were roughly 200,000 hog farms in the United States, and by 2001 that number dwindled to 80,000 despite the number of pigs in the United States remaining roughly the same.[76]

The loss of independent pig farmers, and the increase in farm concentration, is a result of the expanding power of the mega processors.[77] Processors (or integrators) are the corporations that buy livestock from farmers (producers) and slaughter, butcher, and package the animal for consumption.[78] The balance of power between processors and producers has long been skewed in favor of the processors, and every year, as the largest processors buy up more and more smaller processors, it grows worse.[79] The negative impact of these purchases is twofold; they both increase the largest processor's

74. Chuck Abbott, *Fewer Hog Farms, but Far More Hogs per Farm*, SUCCESSFUL FARMING (Aug. 22, 2022), https://www.agriculture.com/news/livestock/fewer-hog-farms-but-far-more-hogs-per-farm [https://perma.cc/YWW6-9ZF8].

75. McGreal, *supra* note 37.

76. Susan M. Brehm, Comment, *From Red Barn to Facility: Changing Environmental Liability to Fit the Changing Structure of Livestock Production*, 93 CALIF. L. REV. 797, 801 (2005).

77. McGreal, *supra* note 37.

78. Paul Stokstad, *Enforcing Environmental Law in an Unequal Market: The Case of Concentrated Animal Feeding Operations*, 15 MO. ENV'T. L. & POL'Y REV. 229, 230 (2008).

79. *Id*. ("Integrators have a strong bargaining advantage over growers. In any given local market, there are typically only a few integrators available to buy meat, since a handful of integrators hold a large percentage of the market."); Karen McMahon, *Pork Powerhouses 2021: Bouncing Back from Covid-19*, SUCCESSFUL FARMING (Oct. 6, 2021), https://www.agriculture.com/livestock/pork-powerhouses/pork-powerhouses-2021-bouncing-back-from-covid-19 [https://perma.cc/MW54-P72Z] ("Two longtime members of the Pork Powerhouses list are missing this year. J.C. Howard Farms of Deep Run, North Carolina, was purchased by Smithfield Foods."); Betsy Freese, *SF Special: How Smithfield Saved the Worst Hog Farm in America*, SUCCESSFUL FARMING (Jan. 4, 2018), https://www.agriculture.com/livestock/pork-powerhouses/how-smithfield-saved-the-worst-hog-farm-in-america [https://perma.cc/Z8HT-V3BQ] ("When Smithfield Foods bought the formerly bankrupt 221,000-sow complex in 2006, PSF was the second-largest pork producer in the U.S. (behind Smithfield).").

monopoly power and decrease the number of buyers available to farmers.[80] As competition among processors dwindles, the mega processors, like Smithfield, the nation's largest pork processor, are able to turn giant profits by keeping prices paid to producers low.[81] Today, the top four pork processors control two thirds of the market, and Smithfield alone owns 25%.[82] In 2016, Smithfield openly admitted to paying hog farmers the lowest amount per pig in fourteen years.[83] In the 1980s, thirty-seven cents on every dollar went back to the animal producer—today, producers receive less than fifteen cents on every dollar.[84]

1. Production Contracts

Production contracts are a particularly exploitative practice in pig operations. Under these contracts, processors retain ownership of the pigs, but the pigs are raised by farmers using their own equipment, facilities, and labor.[85] Once the farmers have raised the pig to the optimal weight, the pig is returned to the processor for slaughter.[86] These contracts are written by the processors and often contain very favorable terms for them, while "forc[ing] producers to follow costly and burdensome mandates, only to see a relatively small share of the

80. Brehm, *supra* note 76, at 801.

81. Cody McCracken, *Good for Business, Bad for Animals: The Rise of Industrialized Agriculture and Its Impact on Agricultural Animal Welfare*, 14 J. ANIMAL & ENV'T L. 1, 5 (2022). In 2023 Smithfield was bought by Chinese-owned WH Group for $4.7 billion. Rishabh Jaiswal & Dominique Patton, *Chinese-Owned Pork Producer Smithfield Prepares for U.S. Listing, Wall Street Journal Reports*, REUTERS (Oct. 19, 2023, 12:30 AM), https://www.reuters.com/markets/deals/chinese-owned-pork-producer-smithfield-prepares-us-listing-wsj-2023-10-19/ [https://perma.cc/PJN9-7NX2].

82. McCracken, *supra* note 81; Sarah Mock, *How Does One of the World's Biggest Pork Firms Go Bust During a Boom?*, GUARDIAN (Oct. 27, 2020, 4:00 PM), https://www.theguardian.com/environment/2020/oct/27/how-does-one-of-the-worlds-biggest-pork-firms-go-bust-during-a-boom [https://perma.cc/5M3L-FTNW].

83. Claire Kelloway, *How to Close the Democrats' Rural Gap*, WASH. MONTHLY (Jan. 13, 2019), https://washingtonmonthly.com/2019/01/13/how-to-close-the-democrats-rural-gap/ [https://perma.cc/MU8M-VUJW].

84. *Id.*

85. McCracken, *supra* note 81, at 7–8.

86. *Id.* at 8.

profits."[87] Farmers are often attracted to these contracts because of their low up-front costs and the fixed price guaranteed per hog and then get stuck in the contract because of crushing debt.[88] One farmer explained how he had to take out millions of dollars in loans to construct the facilities that the processor demanded in the contract, and now he is "probably making only $20,000 a year, if that."[89] He compared producing under these contracts to being an "indentured servant," stating that if he "wasn't in so deep, [he'd] never do it again."[90] Another farmer called the processors out specifically, stating "[o]ur [hog farm] contract was written so that we would never make any profit at all. Most growers are like me, they're in debt, . . . and they do not want to say anything to make the integrator mad, because the integrator could cut their contract."[91]

The use of production contracts nearly took over the chicken industry: currently, 96% of chickens are raised under production contracts.[92] Concerningly, the pig industry is headed in the same direction: in 1994 only 6% of pigs were raised under production contracts, while today over 60% of pigs are raised under such contracts.[93]

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87. Cody McCracken, *Old MacDonald Had a Trust: How Market Consolidation in the Agricultural Industry, Spurred on by a Lack of Antitrust Law Enforcement, Is Destroying Small Agricultural Producers*, 13 WM. & MARY BUS. L. REV. 575, 623 (2022).

88. Madison McVan, *Scaling Up: Use of Production Contracts Has Become the Norm*, IOWA PUB. RADIO (Sept. 23, 2022, 8:47 AM), https://www.iowapublicradio.org/agriculture/2022-09-23/production-contracts-hog-farming-investigate-midwest [https://perma.cc/J9F5-RB24]; David Jackson & Gary Marx, *Illinois Contract Pig Farmer: Work Is Low-Paying, Physically Punishing*, CHI. TRIB. (June 14, 2024, 6:44 PM), https://www.chicagotribune.com/investigations/ct-pig-farms-operators-met-20160802-story.html[https://perma.cc/R2SY-9JH4].

89. Jackson & Marx, *supra* note 88.

90. *Id.*

91. Cameron Oglesby, *'This Plan Is a Lie': Biogas on Hog Farms Could Do More Harm Than Good*, ENERGY NEWS NETWORK (March 28, 2022), https://energynews.us/2022/03/28/this-plan-is-a-lie-biogas-on-hog-farms-could-do-more-harm-than-good/ [https://perma.cc/AVC9-4KHB]. The farmer, Tom Butler, explained that when he inherited the farm from his parents, it was $600,000 in debt. *Id.* Butler has not been able to make a dent in it because any money he makes either goes back into the farm or to the processors who he contracts with. *Id.*

92. FOOD & WATER WATCH, *supra* note 1, at 5.

93. McCracken, *supra* note 81, at 8. Processors also use production contracts to protect themselves

To demonstrate how unfair these contracts are to the average farmer, one of the largest pork producers in the world makes an interesting case study.[94] Maxwell Foods (Maxwell) was one of the top thirty-one global pork producers and produced 1.1 million pigs for slaughter in 2019.[95] In 2021, Maxwell went out of business and cited its production contracts with Smithfield as the reason.[96] According to a lawsuit Maxwell filed against Smithfield, in 1994 the two companies entered into a production contract where Smithfield would purchase all of Maxwell's pork produced in the Carolinas and Virginia.[97] Maxwell claimed that as a result of this contract, it had been selling pork to Smithfield at an unsustainable price.[98] Despite being a global powerhouse in pork production, Maxwell stated that it had no bargaining power against Smithfield, and when it requested to renegotiate the contract, Smithfield repeatedly denied.[99]

Even if farmers want to avoid the exploitative processes of production contracts, there are some areas of the country where it is nearly impossible for farmers to sell their animals any other way.[100] Shipping animals is very costly; so to retain profits, farmers generally only sell to processors within their region.[101] In some areas of the country, processors will only purchase livestock through production contracts, leaving no open market on which independent farmers can sell.[102] Often, farmers reported switching to contract growing only

from liability for environmental harms. Shi-Ling Hsu, *Scale Economies, Scale Externalities: Hog Farming and the Changing American Agricultural Industry*, 94 OR. L. REV. 23, 42 (2015). Despite processor conglomerates retaining control of every part of the hog raising process, contract arrangements leave manure management to the farmers. *Id.* That way, when environmental harms happen, whether they be from poor manure management or from natural disasters like hurricanes or flooding, only the farmer is subject to lawsuit. *Id.* In a survey, the largest processors listed "'reduced environmental and regulatory problems' as the second-leading reason for using production contracts, behind only 'increased financial leverage.'" Stokstad, *supra* note 78, at 237.

94. *See* Mock, *supra* note82.
95. *Id.*
96. *Id.*
97. *Id.*
98. *Id.*
99. *Id.*
100. Johnson-Weider, *supra* note 42, at 692.
101. *Id.* at 692–93.
102. *Id.* at 693.

when "they no longer had access to a slaughter facility as independent producers."[103]

2. Complete Vertical Integration

In a complete vertical integration scheme, the meat processing giants like Smithfield forgo the contracted farmer and raise the pigs themselves, removing independent farmers from the picture altogether.[104] This process is becoming more and more common; for example, the seventh largest pig processor, The Maschhoffs, recently let all of its production contracts expire, and it now owns and manages 100% of its herd size.[105] Concerns about complete vertical integration of the pig industry are high considering that the Senate voted to add a provision to the Farm Bill in 2002 and again in 2012, which would prohibit packers from owning livestock, largely over concerns for the rising monopoly power among processors, the growing margin between the prices that packers pay to farmers, and the prices they charge consumers.[106]

B. The Effects of Biogas

The injustice in requiring the public to pay taxes to corporations to reduce methane pollution, which the corporations voluntarily create by operating an inefficient but cost-saving model, generates opposition to

103. *Id.* (quoting DAVID ANDREW & TIMOTHY KAUTZA, PEW COMM'N ON INDUS. FARM ANIMAL PROD., IMPACT OF INDUSTRIAL FARM ANIMAL PRODUCTION ON RURAL COMMUNITIES 15 (2008)).

104. Stokstad, *supra* note 78, at 235.

105. McMahon, *supra* note 79.

106. Roger A. McEowen, Peter C. Carstensen & Neil E. Harl, *The 2002 Senate Farm Bill: The Ban on Packer Ownership of Livestock*, 7 DRAKE J. AGRIC. L. 267, 268–69 (2002). The Farm Bill is an omnibus legislation passed every five years. *What Is the Farm Bill?*, NAT'L SUSTAINABLE AGRIC. COAL., https://sustainableagriculture.net/our-work/campaigns/fbcampaign/what-is-the-farm-bill/ [https://perma.cc/H8CQ-X268]. It covers programs "ranging from crop insurance for farmers to healthy food access for low-income families, from beginning farmer training to support for sustainable farming practices." *Id.*; *see also* Press Release, Chuck Grassley, Sen., U.S. Senate, Grassley Works to Ban Packer Ownership of Livestock (Feb. 29, 2012), https://www.grassley.senate.gov/news/news-releases/grassley-works-ban-packer-ownership-livestock [https://perma.cc/9NTP-7MLE].

biogas subsidies.[107] On traditional farms, pig waste is stored as a solid, and it is spread in fields, where it is absorbed by the ground and acts as fertilizer to the crops.[108] In this system, the waste produces little to no methane and thus results in low levels of climate-change causing emissions.[109]

On factory farms, waste is typically stored as a liquid in waste lagoons, which creates huge amounts of methane emissions, as well as other environmental issues.[110] These factory farms hold thousands of animals, and the amount of waste created at the facilities is massive.[111] For example, Duplin County, North Carolina has the highest pig population of any county in the United States with just under two million pigs, and the amount of waste pigs produce in this small county alone is equivalent to the human sewage created by the entire city of Boston.[112] But unlike in Boston, CAFOs have no underground sewer system; instead, the millions of tons of waste are stored in Olympic-pool size, open pits and periodically sprayed onto nearby fields.[113] As would be expected, the huge amount of waste being sprayed is often more than the ground can absorb, leading to runoff into nearby streams and rivers.[114]

The use of open pits for waste management produces huge amounts of methane.[115] As the lagoon method of waste management increased between 1990 and 2019, the methane emissions from pig farms grew

107. LAZENBY, *supra* note 23, at 27 ("These are viable methods of manure management that would avoid, rather than simply capture, at least some emissions associated with open-air lagoons of liquid manure. Many livestock operations already employ these lower-emissions practices. Unfortunately for them, however, smaller operations, pasture-based operations, or operations that have a more sustainable business model of dry manure management will not benefit from the significant public funds currently being channeled to biogas-eligible facilities." (footnotes omitted)).

108. *Id.* at 26.

109. U.S. ENV'T PROT. AGENCY, *supra* note 25, at 5–11.

110. LAZENBY, *supra* note 23, at 18.

111. *Id.*

112. FOOD & WATER WATCH, *supra* note 1, at 3. Duplin County has a human population of only 49,520. *Duplin County, North Carolina,* U.S. CENSUS BUREAU (July 1, 2023), https://www.census.gov/quickfacts/duplincountynorthcarolina [https://perma.cc/5ZMR-PGGG]. Pigs outnumber humans in this County forty to one. *Id.*

113. FOOD & WATER WATCH, *supra* note 1, at 3.

114. *Id.* ("Nationwide, pollution from animal feeding operations threatens or impairs more than 14,000 miles of rivers and streams and 90,000 acres of lakes and ponds.").

115. U.S. ENV'T PROT. AGENCY, *supra* note 25, at 5–12.

by 49%.[116] Methane is a particularly detrimental greenhouse gas: its warming potential is twenty-eight times greater than that of carbon dioxide.[117] As a senior researcher at Greenpeace explained, "These methane emissions are not an ordinary occurrence. They are a consequence of profit-maximizing decisions like confinement, concentration, and liquid-based lagoons."[118]

In an anaerobic digester system, covers are placed over the waste lagoons to collect the methane which is processed into biogas.[119] Depending on the size and design of the digester, installation of an anaerobic digester system can cost anywhere from $400,000 to $5 million.[120] Currently, the federal government offers several options for grants or loans to cover the start-up costs of implementing anaerobic digester systems into animal agriculture facilities.[121] A recent study showed that federal or state grants have averaged about 40% of the capital cost.[122] Accordingly, only the largest processors have the capital necessary to implement these digesters.

Once an anaerobic digester system is implemented, CAFOs also receive subsidized revenue from biogas production on an ongoing

116. *Id.*

117. *Importance of Methane*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/gmi/importance-methane [https://perma.cc/MBD8-MCAJ] (Jan 3, 2025). "Animal agriculture produces 65% of the world's nitrous oxide emissions which has a global warming impact 296 times greater than carbon dioxide." Karlie Conzachi, *It May Be Uncomfortable, but We Need to Talk About It: The Animal Agriculture Industry and Zero Waste*, UNIV. OF COLO. BOULDER ENV'T CTR. (Mar. 15, 2022), https://www.colorado.edu/ecenter/2022/03/15/it-may-be-uncomfortable-we-need-talk-about-it-animal-agriculture-industry-and-zero-waste [https://perma.cc/9S8W-TT9U].

118. Held, *supra* note 34.

119. FOOD & WATER WATCH, BIOGAS FROM FACTORY FARM WASTE HAS NO PLACE IN A CLEAN ENERGY FUTURE 2 (2019), https://www.foodandwaterwatch.org/wp-content/uploads/2021/03/ib_1906_biogas_manure-2019-web.pdf [https://perma.cc/3W25-8947].

120. *Id.*

121. LAZENBY, *supra* note 23, at 9–10. The Rural Energy for America Program provides guaranteed loans for the construction of anaerobic digester systems, and the USDA offers several conservation programs to offer grants or loans to cover the cost. *Id.* On average, the installation of these systems costs $1,778,950. *Id.* at 10. There has been significant policy support for the implementation and support of these systems. *Id.*

122. Hyunok Lee & Daniel A. Sumner, *Dependence on Policy Revenue Poses Risks for Investments in Dairy Digesters*, 72 CALIF. AGRIC. 226, 230 (2018). The study concluded that to be profitable, digesters depend on favorable policy rather than on profits from sales. *Id.* at 234–35. Therefore, digester systems are vulnerable investments due to the risk of policy change or technical adjustments. *Id.* at 226.

basis.[123] A significant portion of this revenue comes from the Federal Renewable Fuel Standard (RFS), a program that requires transportation fuels (e.g., gasoline, diesel fuel, jet fuel and propane) in the United States to contain a minimum amount of renewable fuel.[124] Under the RFS program, renewable fuels, such as biogas from CAFO anaerobic digesters, can be sold to producers of transportation fuels so they can meet their quota for the minimum renewable fuel standard.[125] CAFOs can also receive revenue through the Advanced Biofuel Payment Program—which provides payments for the actual quantity of biofuel produced—and they can receive tax credits from the federal government through the Electricity Production Credit or the Investment Tax Credit.[126]

On top of the federal benefits available, some states also provide revenue and tax credits for the production of biogas.[127] For example, in California the Low Carbon Fuel Standard implements a program similar to the federal Renewable Fuel Standard.[128] The California statute explicitly allows CAFOs to participate in both the federal and state program, "represent[ing] potential windfalls for operations well suited to the installation of manure biogas systems."[129] North Carolina passed the Swine Farm Methane Capture Pilot Program to encourage the development of digesters. [130] The Pilot Program guaranteed to selected facilities were that all electricity generated by the digester

123. LAZENBY, *supra* note 23, at 12; *see also Project Planning and Financing*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/agstar/project-planning-and-financing [https://perma.cc/G5V6-VSR6] (June 9, 2024) (providing information on all of the methods for receiving revenue through anaerobic digesters including biogas sales, tax credits, Renewable Energy Certificates, Renewable Fuel Standard and Low Carbon Fuel Standards, Carbon Offset credits, organic products, nutrient enhancement products, and tipping fees).

124. LAZENBY, *supra* note 23, at 12.

125. *Id.*

126. *Id.* at 13.

127. *Id.* at 14.

128. *Id.*

129. *Id.*

130. Lisa Sorg, *Smithfield, Dominion Propose Major Swine Gas Project, But Details Are Secret, Troubling Residents*, N.C. NEWSLINE (Nov. 16, 2020, 6:00 AM), https://ncnewsline.com/2020/11/16/smithfield-dominion-propose-major-swine-gas-project-but-details-are-secret-troubling-residents/ [https://perma.cc/VTK9-8M44].

would be purchased by electric public utilities for seven years.[131] In subsequent years, 218 facilities registered up for the program.[132] Of these 218 facilities, 185 were corporate CAFOs owned by Murphy-Brown (a branch of Smithfield), and thirty-three were CAFOs owned by farmers who had contracts with the largest processors.[133]

Smithfield is currently maximizing federal benefits from biogas by adding mega farms that will be connected directly to the natural gas pipeline.[134] Even large CAFOs cannot achieve this because upgrading and processing biogas for distribution through a pipeline is extremely capital intensive, and "operations on a large scale are needed to reduce costs per unit. The number of cows required to reach reasonably low per-unit costs [for pipeline injectable gas] is usually greater than the number of cows at even the large California milk cow facilities." [135] Dairy cow CAFOs produce significantly more methane than pigs, so the number of pigs required for a profitable pipeline-injectable operation would be even larger.[136]

Biogas subsidies set a backwards incentive: they encourage the destructive environmental practices of the CAFOs while providing no benefit to farms that use sustainable, climate-smart models.[137] According to the EPA, to be financially viable, anaerobic digester systems require at least 2,000 hogs, and manure biogas projects are

131. N.C. DEP'T OF ENV'T & NAT. RES. & N.C. UTILS. COMM'N, JOINT REPORT TO THE ENVIRONMENTAL REVIEW COMMISSION AND THE JOINT LEGISLATIVE UTILITY REVIEW COMMITTEE ON THE IMPLEMENTATION OF THE SWINE FARM METHANE CAPTURE PILOT PROGRAM 1 (2011).

132. Sorg, *supra* note 130.

133. *Id.* Since the original registration in 2008, no additional facilities have registered for participation in the program. N.C. DEP'T OF ENV'T & NAT. RES. & N.C. UTILS. COMM'N, *supra* note 131, at 2.

134. Held, *supra* note 34. North Carolina has allowed Smithfield to install and connect digesters between nineteen CAFOs that Smithfield owns, but local communities are fighting back against these permits. *Id.*

135. Lee & Sumner, *supra* note 122, at 230.

136. U.S. ENV'T PROT. AGENCY, *supra* note 25, at 5-13 tbl.5-7.

137. LAZENBY, *supra* note 23, at 14 ("But, smaller, less established operations, or operations that use dry manure management systems or grazing systems are unlikely to benefit from these funds, even though their models may be more climate smart . . . .").

"most likely to succeed where manure is . . . stored in open pits, ponds, or lagoons."[138]

Biogas subsidies "set[] a perverse precedent of neglecting historically good actors while rewarding the worst polluters in the livestock industry with new revenue and fodder for positive public relations."[139] The subsidies do nothing to support farms that are acting more ethically or operating more climate-smart methods. As million-dollar investments go into digesters, these subsidies will further entrench the "cheap, harmful waste management systems that have long plagued [our] communities."[140] Because biogas subsidies are paid on a per quantity basis, a higher concentration of animals per facility will directly benefit the facility while directly harming the public, the environment, and surrounding communities. [141]

Because it produces more methane, the dairy industry was quicker to adopt biogas infrastructure than the pig industry, and it has demonstrated the effects of these subsidies on animal concentration within the facility.[142] In 2019, Melo Dairy in California applied to install an anaerobic digester and doubled its herd of cows.[143] Threemile Canyon Farms in Oregon is one of the country's largest dairies, holding nearly 70,000 cows at its farm.[144] It recently partnered with an investment firm for a $55 million upgrade to its digester infrastructure.[145] Another California dairy CAFO installed a digester and immediately applied to transfer cows from a different farm onto

138. *Id.* at 18. The EPA and USDA collaborated to create the program AgSTAR, which promotes the use of anaerobic digester systems. *AgSTAR: Biogas Recovery in the Agriculture Sector*, U.S. ENV'T. PROT. AGENCY, https://www.epa.gov/agstar [https://perma.cc/VW42-3QQR]. Under the AgSTAR preliminary screening, the farmer, when determining whether they should implement biogas systems, should consider: "manure availability, whether your manure management technique is compatible with an anaerobic digester, . . . and whether you have the capacity to manage the system." *Project Planning and Financing*, *supra* note 123.

139. LAZENBY, *supra* note 23, at 27.

140. Held, *supra* note 34.

141. LAZENBY, *supra* note 23, at 13 ("The program provides quarterly payments 'for the actual quantity of eligible advanced biofuel produced during that quarter'"); Sorg, *supra* note 130 ("The energy is renewable only as long as you have animals to produce the waste.").

142. Held, *supra* note 34.

143. *Id.*

144. *Id.*

145. *Id.*

the farm with the digester, increasing the farms herd to 31,000 cows.[146] In 2019 a Texas dairy farm more than doubled the number of cattle on its farm, growing its herd from 11,500 to 32,000, after beginning the process of installing a digester on its farm.[147]

In fact, the dairy industry has made it clear that facilities will consolidate as a result of biogas systems.[148] In response to the Animal Legal Defense Fund's comments arguing that a California dairy's application to install an anaerobic digester should be rejected, the dairy facility stated that "consolidation of herds to facilities with digesters should be encouraged in order to best make use of the infrastructure in place and maximize the benefits to the public."[149]

The largest producers in the industry are installing biogas infrastructure, increasing profits, receiving generous tax credits, and garnering public favor, while hundreds of small farms go out of business.[150] Smithfield has partnered with Dominion Energy, a billion-dollar energy company, in a program called Align Renewable Natural Gas (Align RNG).[151] Under this project, Smithfield is building thirty miles of pipeline that will connect nineteen hog farms in North

146. *Id.*

147. Jaxie Pidgeon, *'A Freak Accident': Dimmitt Dairy Farm Explosion Kills Most Cattle in Texas History*, EVERYTHING LUBBOCK, https://www.everythinglubbock.com/news/latest/a-freak-accident-dimmitt-dairy-farm-explosion-kills-most-cattle-in-texas-history/ [https://perma.cc/HXE5-HFZJ] (Apr. 20, 2023, 6:38 AM). Tragically, after the herd was combined, an explosion at the dairy facility killed nearly 18,000 cows. *Id.* The fire is still being investigated, but methane is highly flammable, so officials say the explosion has "immediately set off alarms." *Id.*

148. Letter from Andrew Craig, Vice President of Greenhouse Gas Operations, Cal. Bioenergy LLC, to Cal. Air Res. Bd. 3 (Sept. 29, 2021), https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0185_response1.pdf [https://perma.cc/JBG4-ARU8]. Animal Legal Defense Fund also argued that anaerobic digesters are a false solution to the environmental effects of animal agriculture. *Id.* at 3–4. CalBioGas responded that digesters "must be part of the solution" in the animal agriculture industry if "catastrophic climate change is to be avoided." *Id.* at 4.

149. *Id.* at 3.

150. FOOD & WATER WATCH, *supra* note 1, at 2.

151. ALIGN RENEWABLE NAT. GAS, https://alignrng.com/ [https://perma.cc/3WRX-65EN]. Dominion Energy has its own monopoly in the energy sector and has been exposed for its exploitative pricing: "[b]ecause Dominion is a monopoly, no competition exists to drive its prices down." Press Release, S. Env't L. Ctr., Dominion Energy Has Overcharged Customers More Than a Billion Dollars (Sept. 3, 2021), https://www.southernenvironment.org/press-release/dominion-energy-has-overcharged-customers-more-than-a-billion-dollars/ [https://perma.cc/9P7B-5R39].

Carolina's Duplin and Sampson Counties.[152] The director of Smithfield Renewables touted that the Align RNG project directly benefits local farmers and, in addition, "benefit the surrounding community by creating jobs, bolstering local tax bases, and driving greater economic development."[153]

In reality, the North Carolina project will only create 2.5 permanent jobs because the majority of the work done on building the digesters and pipelines will be temporary.[154] Smithfield says this project will benefit local farmers because they can join the project through long-term contracts.[155] However, the farms must pay for their own digesters, and the four farms that have currently joined the project are other corporate farms in North Carolina, not local family farms.[156]

III. PROPOSAL

CAFOs have a strong incentive to push for the implementation of biogas because it allows them to continue operating in their current destructive manner while "greenwashing" their operations—making it appear as though they are part of the climate change solution rather than one of the largest contributors to climate change.[157] The gas industry too has incentives to push the agriculture industry to implement manure digesters because it is "easier to transform an

152. Oglesby, *supra* note 91.

153. *Id.* Another Align RNG spokesman praised the project, stating "[w]e're not only reducing farm emissions, we're also providing clean energy for consumers and generating income for family farmers." Sorg, *supra* note 130. Notably, the energy produced by this project is by no means "clean" energy. *Id.* According to the permit submitted to the Division of Air Quality, the gas collection facility would emit "more than [sixty] tons of pollution each year." *Id.* Additionally, between the construction of the entire infrastructure, the chemical processes at the lagoon, and the transportation of the gas, it is not clear that the Align RNG project will even decrease emissions. *Id.*

154. Oglesby, *supra* note 91.

155. *Id.*

156. *Id.*

157. Di Camillo, *supra* note 47, at 368. Greenwashing is a term denoting corporate action to "[mislead] the public to believe that a company or other entity is doing more to protect the environment than it is." *Greenwashing – The Deceptive Tactics Behind Environmental Claims*, UNITED NATIONS: CLIMATE ACTION, https://www.un.org/en/climatechange/science/climate-issues/greenwashing [https://perma.cc/TJ2N-C95D]. Greenwashing "promotes false solutions to the climate crisis that distract from and delay concrete and credible action." *Id.*

existing factory to produce and process biogas than to build a new one."[158] This allows gas companies to profit directly from the farmers' investment and labor.[159] The expansive federal anticompetitive laws enacted to assure fair competition have been left largely ineffective through judicial narrowing and through lack of enforcement, and state laws have become increasingly friendly toward CAFOs.[160] Consequently, unfair and exploitative practices have come to control the industry.

As farms continue to concentrate their herd sizes, the CAFO model and the consolidation of the animal agriculture industry have become only more clearly unsustainable.[161] As former-President Biden stated, "there's something wrong when just [seven] percent of the American farms get nearly [ninety] percent of the farm income."[162] Given the lax federal and state regulations of CAFOs, balancing the industry and preventing further monopolization require government action. President Biden has acknowledged this issue, and the disparity caused by the factory farm conglomerates, stating factory farms have "outsized control over the industry" that enables them to set prices.[163] The Biden Administration prioritized aiding family farms, investing

158. Gittelson et al., *supra* note 70, at 359.

159. *Id.* By falsely motivating farmers to invest in biogas, the gas industry is able to "profit from the dividends of the farmers' practically unpaid labor." *Id.*

160. *See generally* Kamila Lis, *Coalitions in the Jungle: Advancing Animal Welfare Through Challenges to Concentration in the Meat Industry*, 19 ANIMAL L. 63 (2012); McCracken, *supra* note 87; Allison Kite, *As Massive Livestock Operations Move in, Fighting Them Gets Harder for Rural Neighbors*, KAN. REFLECTOR (June 14, 2021, 9:00 AM), https://kansasreflector.com/2021/06/14/as-massive-livestock-operations-move-in-fighting-them-gets-harder-for-rural-neighbors/ [https://perma.cc/9DCV-FAML].

161. *See generally* David A. Domina & C. Robert Taylor, *The Debilitating Effects of Concentration Markets Affecting Agriculture*, 15 DRAKE J. AGRIC. L. 61 (2010).

162. President Biden, Remarks by President Biden on How Bidenomics and His Investing in America Agenda are Ensuring Rural Americans Do Not Have to Leave Their Hometowns to Find Opportunity (Nov. 1, 2023) (transcript available at https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/11/01/remarks-by-president-biden-on-how-bidenomics-and-his-investing-in-america-agenda-are-ensuring-rural-americans-do-not-have-to-leave-their-hometowns-to-find-opportunity-northfield-mn/ [https://perma.cc/69AY-952J]).

163. *Id.*

nearly $20 billion to promote competition in the agricultural markets.[164]

Creating a profit stream for biogas will run counter to these stated goals. Biogas will only be profitable for the largest, most concentrated CAFOs, thus increasing their monopoly and market power. Further, as explored in the next sub-part, the laws currently in place to encourage competition and prevent unfair practices by the corporate conglomerates are not adequate to protect the agriculture industry from further concentration.

A. Narrowing of Anticompetitive Statutes

In 1921, the Packers and Stockyards Act (PSA) was passed in response to anticompetitive practices in the animal agriculture industry.[165] At the time, the five largest processors, called the "Big Five," had a monopoly over the livestock processing industry.[166] In conditions that mirror the animal agriculture market today, the monopoly held by the Big Five allowed them to drive down the prices paid to farmers for livestock while keeping the cost to consumers the same.[167] As the margin between the cost of livestock and the cost of meat grew, so did the Big Five's profits.[168] The PSA was passed to break up the Big Five and to "assure fair competition and fair trade practices, to safeguard farmers and ranchers . . . to protect consumers . . . and to protect members of the livestock, meat, and

164. *Id.* These investments help farmers to practice climate-smart agriculture and diversify income streams, so they are no longer "at the mercy of the commodity markets and the big corporations." *Id.* By helping farmers sell to their local markets directly rather than through grocery stores, farmers can go from making eighteen cents for every dollar to making between fifty and seventy-five cents on every dollar for the exact same product. *Id.*

165. *The Packers and Stockyards Act: An Overview*, THE NAT'L AGRIC. L. CTR., https://nationalaglawcenter.org/overview/packers-and-stockyards [https://perma.cc/83UJ-7W5D].

166. Azzeddine M. Azzam, *Competition in the US Meatpacking Industry: Is It History?*, 18 AGRIC. ECON. 107, 117–18 (1998).

167. *Id.* at 117.

168. *Id.* at 117–18.

poultry industries from unfair, deceptive, unjustly discriminatory and monopolistic practices."[169]

For several decades after the 1930s, the PSA succeeded in limiting consolidation in the hog industry.[170] However, around the 1970s, as the USDA prioritized efficiency in agriculture, the courts followed suit.[171] Despite Congress's expansive intent in enacting the PSA, appellate courts instead began to interpret the PSA more narrowly, requiring plaintiffs show either the intent to cause adverse impact on competition or that injury would be likely to find that a firm violated the PSA.[172] Importantly, the plain text of the PSA does not impose any intent requirements to find a firm in violation of anticompetitive practices.[173] Judges who disagreed with this judicial narrowing called on the courts to "refrain from reading additional terms, such as those that would require an adverse effect on competition, into [the PSA]."[174]

Through the appellate courts' narrowed interpretation, a statute that was intended to prevent consolidation has lost nearly all its bite, and today, even fewer processors control the industry than when the PSA was originally enacted.[175] For example, in 2002, the Eastern District of Virginia granted summary judgment for Smithfield, finding that it did not violate the PSA when the processor stopped purchasing pigs on the cash market in most of Virginia and instead built CAFOs and

169. *Packers and Stockyards Act*, AGRIC. MKTG. SERV., U.S. DEP'T AGRIC. https://www.ams.usda.gov/rules-regulations/packers-and-stockyards-act [https://perma.cc/DKK9-JFW6].

170. Lis, *supra* note 160, at 69. In 1970, the four largest processors held only 20% of the market share. *Id.* at 75.

171. *Id.* at 86.

172. *Id.* at 86–87.

173. 7 U.S.C. § 192(a). It is unlawful for any packer to "engage in or use any unfair, unjustly discriminatory, or deceptive practice or device." *Id.*

174. Wheeler v. Pilgrim's Pride Corp., 536 F.3d 455, 459 (5th Cir. 2008).

175. McCracken, *supra* note 81, at 5 ("The controlling trusts of the gilded age, whose market dominance spurred the creation of antitrust laws, have been replaced by even more consolidated groups of companies that control an even greater share of the markets.").

owned its pigs through direct ownership.[176] This caused financial hardship to the smaller farms who had depended on Smithfield to buy their pigs.[177] The court acknowledged that the plaintiffs showed Smithfield's practices harmed independent farms but found the plaintiffs' argument failed because they did not allege that Smithfield was motivated by a desire to manipulate the market.[178]

In a similar case, a jury found that Tyson had violated the PSA in the cattle industry when it stopped purchasing cattle from the cash market and instead contracted almost exclusively with CAFOs.[179] The plaintiffs argued that Tyson used these contracts to control market prices for cattle, and this drove down prices for producers who depended on the open market.[180] In finding that Tyson had reduced the market value of cattle, the jury awarded plaintiffs over $1.2 billion.[181] On appeal, the court agreed that Tyson's marketing agreement negatively impacted the price of cattle.[182] However, the court went on to find that the defendant's practices "promote[d] efficiency" in the cattle market, and since Tyson provided justifiable pro-competitive reasons for their marketing agreements, Plaintiffs failed to show how

176. Griffin v. Smithfield Foods, Inc., 183 F. Supp. 2d 824, 825 (E.D. Va. 2002). Selling on the cash market consists of packers from around the country visiting farms to inspect the livestock ready to be sold. Pickett v. Tyson Fresh Meats, Inc., 420 F.3d 1272, 1275 (11th Cir. 2005). If the packer likes the livestock, they will make an offer to the producer. *Id.* This gives producers a better opportunity to receive a fair price because they have the opportunity to negotiate, and, because producers often communicate with one another to see what other packers are offering, to ensure they receive a fair price. *Id.*

177. *Griffin,* 183 F. Supp. 2d at 825.

178. *Id.* at 828. The court explained that:

> While such independence may be a virtue in many respects, the family farm, the corner grocer and the main street specialty store have all fallen victim to the direction in which the country's economy has developed. No degree of sympathy for the Plaintiffs' difficulty in maintaining their traditional way of doing business translates to wrongdoing on the part of the Defendants.

Id.

179. Pickett v. Tyson Fresh Meats, Inc., 315 F. Supp. 2d 1172, 1174 (M.D. Ala. 2004), *aff'd*, 420 F.3d 1272 (11th Cir. 2005).

180. *Id.* at 1175.

181. *Id.* at 1174.

182. *Pickett*, 420 F.3d 1272, 1286–87 ("[W]hile Pickett presented evidence at trial that Tyson's marketing agreements have decreased the price of cattle on the cash market and on the market as a whole, he did not present any evidence from which a reasonable jury could conclude that Tyson lacked pro-competitive justifications for using the agreements.").

Tyson's practices adversely impacted commerce, and the court set aside the jury verdict.[183]

In response to the judicial narrowing of the PSA, the USDA recently promulgated new rules to strengthen the PSA.[184] Additionally, the USDA proposed a rule in June of 2024 that would clarify the "unfair practices" requirement of the PSA, expanding claims to any activity that "causes or is likely to cause substantial injury to one or more market participants," rather than the current federal appellate court interpretation which requires parties demonstrate harm to competition in general.[185] This clarifying rule would go a long way in allowing parties to challenge the unfair, deceptive, and anti-competitive practices of CAFOs that currently dominate the industry, and may have allowed plaintiffs in the above cases to recover for their damages.

B. Lack of Enforcement

Around the 1970s, as the judiciary began narrowing the PSA in the interest of economic efficiency, the USDA, which enforces the PSA, followed suit.[186] Under the guise of economic efficiency, the USDA permitted merger after merger until the industry reached levels of consolidation exceeding those in 1921.[187] In recent reports, the USDA claims that there is not a lack of competition because the USDA looks at the United States as an entire market.[188] However, this method of analysis fails to take into account a significant factor in the animal agriculture industry: perishability. Because meat and livestock are perishable, producers are generally only able to sell to regional

183. *Id.* at 1280.

184. *The Packers and Stockyards Act: An Overview*, *supra* note 165.

185. Fair and Competitive Livestock and Poultry Markets, 89 Fed. Reg. 53886, 53886–87, 53910 (proposed June 28, 2024) ("USDA recognizes that some courts have recently required proof of competitive injury before finding that conduct is unfair. Those courts were not offered an alternative definition for unfair, which this rulemaking would propose.") (to be codified at 9 C.F.R. pt. 201).

186. Kelsea Kenzy Sutton, *The Beef with Big Meat: Meatpacking and Antitrust in America's Heartland*, 58 S.D. L. REV. 611, 615, 627 (2013).

187. *Id.* at 619. In 1985, the top four pork processors had 32% of the market; by 2007, the top four controlled 66%. *Id.*

188. McCracken, *supra* note 87, at 597.

buyers.[189] Although there may be many buyers in the United States market as a whole, in some regions, producers have only "one or two buyers, creating no real competition in their areas."[190]

The lax enforcement of the PSA can also be attributed to the capture of regulatory agencies.[191] The USDA has long been accused of supporting the interests of Big Ag over those of the public.[192] The largest processors are multi-billion dollar companies that wield substantial power over the economy and influence legislation.[193] As one USDA whistle-blower described, "large meat producers like Cargill, Tyson, Smithfield, Swift (JBS), and Sanderson Farms are often given a 'pass' thanks to their high-paid lobbyists."[194] USDA employees have also been accused of "go[ing] easy" on the largest processors so that when they leave the USDA, they can get lucrative positions within these corporations.[195] Though the USDA acknowledged the need to strengthen enforcement of the PSA and promulgated new rules on the topic, further progress must be made to break apart the outsized control that a few companies have over the animal agriculture industry, especially as these corporations increase their profits through biogas revenue.

C. State Protections of Big Ag

With federal and state governments doing little to prevent the rapid growth of CAFOs, communities affected by these farms turn to their local government for aid. Unfortunately, time and time again, these

189. *Id.*
190. *Id.*
191. Lis, *supra* note 160, at 73.
192. McCracken, *supra* note 87, at 598 ("The economic power in agriculture has also translated to the use of intimidation, capture of regulatory agencies, and often successful attempts to influence legislation regulating agricultural trusts.").
193. *Id.*
194. ORG. FOR COMPETITIVE MKTS., CAPTURED: HOW AGRIBUSINESS CONTROLS REGULATORY AGENCIES AND HARMS PRODUCERS AND CONSUMERS 2 (2020), https://competitivemarkets.com/wp-content/uploads/2020/08/Regulatory-Capture-Paper_Final.pdf [https://perma.cc/5GFQ-ZMLX].
195. *Id.*; Lis, *supra* note 160, at 73–74. The whistleblower described USDA as an "old boys club with a revolving door 'between the USDA . . . and the captains of the meat industry.'" ORG. FOR COMPETITIVE MKTS., *supra* note 194, at 2.

local regulations are preempted by state laws which are favorable to Big Ag.[196] There are very few federal laws that outline how CAFOs can operate; rather, states create their own regulatory processes, but there are often large gaps in state animal agriculture regulatory frameworks. [197] To fill the gaps, and to protect their residents from the negative effects of CAFOs, local governments frequently pass ordinances that strictly regulate factory farms within their area.[198] While the regulations passed on the local level vary state to state, the state response to these regulations is quite uniform: the state dismantles local-level protections by prohibiting counties from imposing regulations on CAFOs that are more stringent than state law.[199] In almost every instance, local government actions are more protective of human health and the environment than the state government.[200]

For example, in 2022, an employee at a Smithfield farm in Missouri accidentally left a valve open, draining an entire hog manure lagoon, which spilled 300,000 gallons of hog waste and polluted between twelve and fifteen miles of surrounding creeks and rivers.[201] Smithfield was fined only $18,000 for the incident, coming down to only $0.04 per gallon.[202] The impacted counties in Missouri knew that for the billion-dollar company, this small fine likely did little to deter

196. *See, e.g.*, Lily Moran, *Pretextual Preemption: The Modern Weaponization of Preemption in the Regulation of Concentrated Animal Farming Operations*, 170 U. PA. L. REV. 1589, 1589 (2022).

197. *See, e.g.*, Allison Kite, *Some of Missouri's Largest CAFOs Are Seeking Less Stringent State Regulation*, MO. INDEP. (June 23, 2021, 9:00 AM), https://missouriindependent.com/2021/06/23/some-of-missouris-largest-cafos-are-seeking-less-stringent-state-regulation/ [https://perma.cc/KB8R-PA

198. Moran, *supra* note 196, at 1618–19.

199. *Id.* at 1620; Shannon M. Roesler, *Federalism and Local Environmental Regulation*, 48 U.C. DAVIS L. REV. 1111, 1115 (2015).

200. Roesler, *supra* note 199, at 1115.

201. Allison Kite, *Missouri Fines CAFO $18,000 for Polluting Streams with 300,000 Gallons of Waste*, MO. INDEP. (Mar. 9, 2022, 1:34 PM) [hereinafter Kite, *Missouri Fines CAFO*], https://missouriindependent.com/2022/03/09/missouri-fines-cafo-18000-for-polluting-streams-with-300000-gallons-of-waste [https://perma.cc/7CUH-EXKJ]; Allison Kite, *Missouri Supreme Court Upholds State Law Prohibiting Local CAFO Regulations*, MO. INDEP. (Mar. 21, 2023, 2:48 PM), [hereinafter Kite, *Missouri Supreme Court Article*] https://missouriindependent.com/2023/03/21/missouri-supreme-court-upholds-state-law-prohibiting-local-cafo-regulations/ [https://perma.cc/5JTL-9R95].

202. Kite, *Missouri Fines CAFO*, *supra* note 201.

future behavior.[203] In response to this devastating spill, twenty counties in Missouri passed ordinances which imposed strict regulations on CAFOs.[204] Just a few months later, Missouri passed a law preempting these local ordinances, prohibiting counties from imposing regulations on CAFOs which are "inconsistent with or more stringent than" state laws or regulations.[205] Two of the counties that passed ordinances brought suit, arguing that the 2019 law violated the Missouri Constitution, which grants authority to counties to regulate agriculture.[206] The Missouri Supreme Court upheld the state law, finding that the law did not violate the Missouri Constitution because the counties' powers are "only as broad or narrow as the General Assembly wants them to be."[207] This left Missouri counties with no power to regulate the CAFOs that are destroying their local environments, despite the fact that these counties and their residents are the ones affected by the CAFOs unscrupulous practices.[208]

States across the Midwest exhibit this same pattern as counties enact moratoriums or regulations on the construction of CAFOs within them.[209] In response to these ordinances, CAFO industry groups send letters to the towns threatening to bring legal action.[210] Most towns back down after receiving threats of litigation and repeal the

203. *Id.*; Hallie Gu & Dominique Patton, *Chinese Pork Giant WH Group's 2021 Profit Lifted by Higher US, European Sales*, REUTERS (Mar. 28, 2022, 7:42 AM), https://www.reuters.com/world/china/chinese-pork-giant-wh-groups-2021-profit-lifted-by-higher-us-european-sales-2022-03-28/ [https://perma.cc/J6HA-7HAC]. Chinese pork processing giant, WH Group Ltd., owns Smithfield Foods. *Id.* Company filings indicate that, in 2021, its revenue grew by 6.7%, increasing overall revenue to $27.29 billion. *Id.*

204. Kite, *Missouri Supreme Court Article*, *supra* note 201. The county ordinances imposed restrictions such as requiring factory farms to be a certain distance from homes or imposed stricter air and water protections. *Id.*

205. *Id.* Two years after this law was passed, the Missouri General Assembly "tightened it even further," prohibiting county ordinances from being "inconsistent with, in addition to, different from, or more stringent" than state laws or regulations. *Id.*

206. *Id*.

207. Cedar Cnty. Comm'n v. Parson, 661 S.W.3d 766, 772 (Mo. 2023).

208. Kite, *Missouri Supreme Court Article*, *supra* note 201. ("In effect, [the law] prohibits counties from imposing any policy over CAFOs.").

209. John McCracken, *A Tiny Wisconsin Town Tried to Stop Pollution from Factory Farms. Then It Got Sued.*, GRIST (Dec. 5, 2022), https://grist.org/accountability/what-happens-when-citizens-try-regulate-factory-farms/ [https://perma.cc/78N3-87ZN].

210. *Id.* As one activist, involved in the opposition of CAFOs in her county put it, "[t]his is standard operating procedure for the Big Ag boys." *Id.*

ordinances, but one Wisconsin town, Laketown, tried to hold its ground.[211] The Laketown ordinance imposed a rather reasonable requirement: that CAFOs submit plans for "preventing infectious diseases, air pollution and odor [and] managing waste and handling dead animals" as well as property value impact studies, a surety for clean-ups, and an annual $1-per-animal unit fee.[212] The CAFOs responded to these minor requirements by bringing a lawsuit against the county, arguing that state law preempts the local ordinance.[213] Laketown citizen and trial lawyer Andy Marshall and his brother agreed to represent the town at no cost to prevent the small town from being '"steamrolled' by wealthy interest groups."[214] Recently, new Laketown officials were elected who rescinded the new regulations, and the lawsuit was dropped.[215]

D. An Argument for The Termination of State and Federal Funding for Biogas

By funneling money into biogas infrastructure and subsidies, the federal and state laws will not only encourage further development of CAFOs, but will also further entrench farmers into the unsustainable CAFO model. The value of anaerobic digesters is in using the system as a "stopgap," that is, as a "means to reduce emissions quickly in the absence of developing or implementing alternative measures."[216] When the government supplies funding for the expensive infrastructure of anaerobic digesters and incentivizes the increase in manure production through tax credits for biogas production, CAFOs will have no reason to decrease herd sizes on their farms or to switch

211. *Id.*

212. Bennet Goldstein, *Wisconsin Towns Brace for Next Fight on Local Control Over Large Farms*, INVESTIGATE MIDWEST (July 12, 2023), https://investigatemidwest.org/2023/07/12/wisconsin-towns-brace-for-next-fight-on-local-control-over-large-farms/ [https://perma.cc/58BW-THP7].

213. Complaint at 6, Byl v. Town of Laketown, No. 22-CV-000274 (Wis. Cir. Ct. 2022). Plaintiffs argued that Wisconsin's Livestock Facility Siting Law preempted most control over livestock facilities. *Id.* The Siting law provides the uniform regulations that livestock facilities operating in Wisconsin must follow. WIS. STAT. § 93.90 (2003).

214. Goldstein, *supra* note 212.

215. *Id.*

216. LAZENBY, *supra* note 23, at 24.

to a more climate-friendly model. Because it is the corporation's cost-saving choices that create this methane pollution, it should not be the public's responsibility to front the costs of immediate methane reduction; requiring corporations to reduce their own emissions incentives them to develop or implement alternative measures that are more effective than digesters.[217]

In 2016, Smithfield announced that it aimed to reduce its total greenhouse gas emissions by 25% by year 2025.[218] However, studies show that even if manure digesters were installed on every farm and worked at optimal efficiency, the industry still would not be able to meet this goal.[219] These studies make it clear that methane needs to be reduced at the source, meaning decreasing the concentration of livestock per farm so the ground is more readily able to absorb the methane from the animal waste. Source reduction will not happen if all the largest farms have installed anaerobic digesters which require the ongoing generation of manure to be financially viable.[220] Rudi Roeslein, a biogas investor, made this clear as he explained, "if we have a steady flow of pigs, we are looking at mid-teens returns on investment for the methane collection."[221]

Additionally, manure digesters require a large upfront investment. Typically, it will take an estimated five to six years to recoup the initial investment.[222] Once CAFOs have used the capital to install anaerobic digester systems, they will have no incentive to develop cleaner, more efficient models. The NAACP president of Duplin County, where Smithfield has contaminated the nearby river so extensively that even the river smells of manure, expressed his fear that anaerobic digesters are being implemented in place of cleaner but less profitable technology, stating of Smithfield: "[t]he corporation has refused to

217. *Id.*

218. Press Release, Smithfield Foods, Inc., Smithfield Foods to Become Carbon Negative by 2030: Company Commits to Bold Climate Action with Industry-Leading Pledge (Sept. 3, 2020), https://www.smithfieldfoods.com/press-room/2020-09-03-Smithfield-Foods-to-Become-Carbon-Negative-by-2030 [https://perma.cc/84DJ-2G62].

219. Gittelson et al., *supra* note 70, at 355.

220. *Id.* at 357–58.

221. Freese, *supra* note 79.

222. Gittelson et al., *supra* note 70, at 358.

implement any technology to clean up the water, citing the cost of doing so was too expensive . . . . Yet the cost of this biogas project rivals the costs that would have been to implement cleaner and safer technology."[223] Corporations are "hiding behind promises of reduced emissions" via biogas systems because they "don't incentivize companies to stop industrial hog farming or find a less intrusive waste management system."[224]

Given the significant up-front costs to install anaerobic digesters, biogas infrastructure is not economically viable without state and federal subsidies.[225] Therefore, by withdrawing this funding, states and the federal government will effectively prevent CAFOs from profiting from biogas production. As a result, the animal agriculture industry will be incentivized to find alternative, more effective methods towards sustainability.

CONCLUSION

Biogas subsidies perversely reward only those CAFOs that are most devastating to animals, our environment, and surrounding communities while doing nothing to reward farms practicing responsible and sustainable farming. By making animal waste hugely profitable for CAFOs, the government will effectively extirpate any future development of cleaner alternatives to biogas, and it will prevent any possibility for the animal agriculture industry to revert to the more sustainable small-farm method. Accordingly, the government must

223. Oglesby, *supra* note 91; Lisa Sorg, *What's in the Water?* N.C. NEWSLINE (Dec. 17, 2018), https://ncnewsline.com/2018/12/17/high-levels-of-bacteria-found-in-duplin-county-watershed/ [https://perma.cc/U4SX-XYLH]. Tests of the river found that it is contaminated with elevated levels of "fecal coliform bacteria, nitrogen, phosphorus and ammonia." *Id.* State water quality standards limit fecal coliform to 200 colony forming units (CFUs), but testing of rivers in the area found concentrations ranging from 6,000 to 14,000 CFUs. *Id.* The river testing was done because of a public nuisance lawsuit that Duplin County residents brought against Smithfield. *Id.* While the Plaintiffs won this lawsuit, it resulted in the North Carolina state legislature passing an even more restrictive version of the state's right to farm laws which will essentially outlaw lawsuits against the pig industry in the state of North Carolina. *Id.*

224. Oglesby, *supra* note 91.

225. Gittelson et al., *supra* note 70, at 358.

more closely regulate the biogas industry, and taxpayer funding for biogas subsidies must be withdrawn.

Further concentration and consolidation of the hog industry has a tremendous negative impact for both producers and consumers. Critics of the current state of the animal agriculture industry have found that concentration among the largest processors has led to "higher consumer prices, lower prices paid for farm commodities, increased corporate profits, reduced wages, less innovation, and waning productivity growth."[226] Additionally, factory farms disparately impact animal welfare, human health, and the environment when compared against non-CAFO farms. The laws currently in place are not sufficient to protect consumers or the public, and the implementation of biogas subsidies will only further entrench this system. The government cannot continue to use taxpayer money to fund this harmful model when it is evident that such funding will prevent any future development in an industry that needs a complete overhaul.

226. JAMES M. MACDONALD, XIAO DONG & KEITH O. FUGLIE, U.S. DEP'T OF AGRIC. ECON. RSCH. SERV., EIB-256, CONCENTRATION AND COMPETITION IN U.S. AGRIBUSINESS, at i (2023), https://ers.usda.gov/sites/default/files/_laserfiche/publications/106795/EIB-256.pdf?v=97361 [https://perma.cc/HSL2-S9GA].