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Testimony for HB1312 -Water Pollution Control - Discharge Permits - Industrial Poultry Operations

Bill Sponsor: Delegate Stewart
Committee: Environment and Transportation
Person Submitting: Sarah Goldman
Position: FAVORABLE

Disclaimer: The opinions expressed herein are our own and do not necessarily reflect the views of The Johns Hopkins University.

Honorable Chair Barve, Vice Chair Stein, and members of the committee, thank you for the opportunity to submit this statement for the record in support of H.B. 13412. We are researchers at the Johns Hopkins Center for a Livable Future, an interdisciplinary academic center focused on food systems and public health. The Center is in the Bloomberg School of Public Health's Department of Environmental Health and Engineering. We have been researching Industrial Food Animal Production since our Center's founding in 1996. Recognizing the negative public health implications that results from industrial food animal production, we support H.B. 1312.

Confined Animal Feeding Operations (CAFOs) are harmful to human and environmental health. Due to the negative impacts associated with CAFOs, the Center for Disease Control determined that these operations pose risks to public health and the environment.[1] The American Public Health Association also released a policy statement calling for a precautionary moratorium on new and expanding CAFOs based on these operations' negative public health impacts.[2]

<u>CAFOs contribute to negative human health outcomes via environmental degradation</u>
Raising animals in large, high-density operations leads to the routine accumulation of large volumes of animal waste, often at rates far exceeding the capacity of nearby farmland to absorb it. The excess waste produced is often disposed of in a manner that can pollute surface and groundwater resources, posing public health and ecological hazards. CAFO-generated manure has constituents and byproducts of health concern, including antibiotics, pathogens, bacteria,

[1] Centers for Disease Control and Prevention. Animal feeding operations. Available at: https://www.cdc.gov. Accessed November 28, 2019.
[2] American Public Health Association. Precautionary Moratorium on New and Expanding Confined Animal Feeding Operations. Available at: https://www.apha.org/policies-and-advocacy/public-health-policy-statements/.

nitrogen, and phosphorus.[3] Manure from these operations can contaminate ground and surface waters with nitrates, drug residues, and other hazards,[4] and studies have demonstrated that humans can be exposed to waterborne contaminants from poultry operations through the recreational use of contaminated surface water and the ingestion of contaminated drinking water.[5],[6] This is of particular concern for the 34.2 million Americans, approximately 11% of the population, who rely on private wells for drinking water and household use,[7],[8] as private wells are not monitored by government agencies to ensure safe levels of pathogens.[9] Furthermore, land application of manure in excess of the land's absorptive capacity can lead to excess nitrogen and phosphorus in soil, water resource pollution, eutrophication of surface waters, and algae overgrowth, including some algae producing human toxins.[10] Exposure to elevated levels of nitrates in drinking water is associated with adverse health effects such as cancer, birth defects and other reproductive problems, thyroid problems, and methemoglobinemia (blue baby syndrome).[11] In addition, exposure to algal toxins has been linked to adverse health effects including gastrointestinal illness, liver inflammation and failure, severe dermatitis, respiratory paralysis, cardiac arrhythmia, and tumor promotion.[12]

CAFOs pose additional risks to workers and surrounding communities

CAFOs pose a particular risk for workers. One Pennsylvania study showed that living in close proximity to poultry operations may increase the risk of community-acquired pneumonia.[13] In addition, CAFO workers can be exposed to airborne waste particles, drug residues, heavy metals, and potentially harmful pathogens, many of which can be transferred into neighboring communities by these workers.[14],[15] People living near CAFOs may also have an increased risk of

[3] Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality. Washington, DC: Environmental Protection Agency; 2013.
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[5] Environmental Protection Agency. Relation between nitrates in water wells and potential sources in the Lower Yakima Valley, Washington State. Available at: https://cfpub.epa.gov. Accessed November 28, 2019.
[6] Burkholder J, Libra B, Weyer P, et al. Impacts of waste from concentrated animal feeding operations on water quality. Environ Health Perspect. 2007;115:308–312.
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[10] Ibid.
[11] Ward MH. Too much of a good thing? Nitrate from nitrogen fertilizers and cancer. Rev Environ Health. 2009;24:357–363.
[12] Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality. Washington, DC: Environmental Protection Agency; 2013.
[13] Poulsen MN, Pollak J, Sills DL, et al. High-density poultry operations and community-acquired pneumonia in Pennsylvania. Environ Epidemiol. 2018;2:e013.
[14] Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality. Washington, DC: Environmental Protection Agency; 2013.

infection owing to the transmission of harmful microbes from CAFOs via flies or contaminated water and air.[16]

CAFOs perpetuate environmental injustice

Research has also revealed that CAFOs have disproportionate negative health impacts for low-income, disadvantaged, and economically distressed communities, as well as communities of color.[17],[18],[19] The establishment of CAFOs in a community is frequently associated with declines in local economic and social indicators (e.g., business purchases, infrastructure, property values, population, social cohesion), which undermine the socioeconomic and social foundations of community health.[20] Moreover, the negative health and environmental impacts associated with CAFOs can become concentrated in these communities due to their limited economic and political resources to address problems.

CAFOs contribute to antibiotic resistance

Administering antibiotics to animals at levels too low to treat disease fosters the proliferation of antibiotic-resistant pathogens.[21] While many CAFOs utilize antibiotics prophylactically, there is scientific consensus that antibiotics administered to food animals contribute to antibiotic resistance in humans.[22],[23] Studies have demonstrated that antibiotic-resistant pathogens are found in animal operations that administer antibiotics for purposes other than treating or controlling veterinarian-diagnosed disease and are also found in the environment in and around production facilities.[24] Pathogens can spread from animal production operations to surrounding communities, exposing workers, their family members, and community members to these resistant pathogens.[25] In addition, numerous studies have shown that industrial food animal

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[15] Graham JP, Leibler JH, Price LB, et al. The animal-human interface and infectious disease in industrial food animal production: rethinking biosecurity and biocontainment. Public Health Rep. 2008;123:282–299.
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[17] Donham KJ, Wing S, Osterberg D, et al. Community health and socioeconomic issues surrounding concentrated animal feeding operations. Environ Health Perspect. 2007;115:317–320.
[18] Nicole W. CAFOs and environmental justice: the case of North Carolina. Environ Health Perspect. 2013;121:a182–a189.
[19] Abara W, Wilson SM, Burwell K. Environmental justice and infectious disease: gaps, issues, and research needs. Environ Justice. 2012;5:8–20.
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production workers and their family members, as well as those who are in residential proximity to CAFOs, face increased risk of antibiotic-resistant infections. Resistant infections in humans are more difficult and expensive to treat[26] and more often fatal[27] than infections with non-resistant strains.

H.B. 1312 is an important step towards reducing the negative public health implication of CAFOs. We applaud the committee for considering this bill.

Sincerely,

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Maryland Supports Poultry Industry Reform

News release | Blogpost | Survey results | Infographics (4)

Summary of Findings

Our 2016 statewide survey of Maryland voters, with a focus on the Eastern Shore, found that there is broad support for a number of reforms to the poultry industry. Hot spot areas for reform include the issues of who pays for chicken waste removal, the contracting system that leaves seven in ten growers living below the poverty line, practices that harm the environment and jeopardize Maryland's tourist industry, and limits on the number of new chicken houses that can be built.

Methodology

The Johns Hopkins Center for a Livable Future worked with Greenberg Quinlan Rosner (GQR), a public opinion research company, to conduct a survey of Maryland voters to determine perceptions about the poultry industry and attitudes toward reform within the industry. The survey was conducted in 2016 among 500 registered voters across Maryland, with an additional 100 voters from the Eastern Shore for a statewide total of 600.

Key Findings

- Maryland voters believe government should do more to solve problems and meet needs.
- Maryland voters want large chicken processing companies to pay for the removal of excess waste.
- Across party lines, Maryland voters support reforms to the poultry contracting system.
- Maryland voters support a 5-cent per chicken fee on processing companies that would be dedicated to protecting the environment.
- Maryland voters support measures that would allow local areas to limit new poultry houses and number of chickens.
- Maryland voters said they would feel more favorably toward a legislator who supports increased oversight.

For more information about the survey and its findings, please contact Robert Martin, director of the Food Policy Program at CLF: rmarti57@jhu.edu

Precautionary Moratorium on New and Expanding Concentrated Animal Feeding Operations

Date: Nov 05 2019 | **Policy Number:** 20194
Key Words: Environment, Environmental Health, Agriculture

Abstract

Over the last six decades, food animal production in the United States has transformed from a system of small and medium-sized farms toward one characterized by much larger operations that concentrate large numbers of animals and their manure in relatively small geographic areas. These operations function with the high throughput and rapid turnover of an industrialized system and are often referred to as concentrated animal feeding operations (CAFOs). The enormous accumulation of manure and other untreated waste created by CAFOs is often stored and disposed of in a manner that pollutes the air, surface, and groundwater, posing risks to the environment and human health, particularly for CAFO workers and nearby residents. These operations also disproportionately affect low-income, disadvantaged communities with high proportions of racial and ethnic minority residents, raising serious social and environmental justice concerns. The current industrial system of food animal production has externalized the costs of environmental degradation and adverse health impacts, keeping retail meat prices artificially low while shifting health and environmental costs onto communities and individual Americans. Moreover, these negative, externalized costs are likely to mount in coming years. Despite the growing evidence that CAFOs pose health and environmental risks and negatively impact workers and communities, CAFO regulations and their enforcement have failed to adequately protect human health and the environment. This policy statement calls for a moratorium on the establishment of new CAFOs and expansion of existing CAFOs until regulation and enforcement conditions are in place to adequately protect the public's health.

Relationship to Existing APHA Policy Statements

- APHA Policy Statement 201713: Establishing Environmental Public Health Systems for Children at Risk or with Environmental Exposures in Schools
- APHA Policy Statement 201712: Advancing a 'One Health' Approach to Promote Health at the Human-Animal-Environment Interface
- APHA Policy Statement 201711: Public Health Opportunities to Address the Health Effects of Air Pollution
- APHA Policy Statement 20177: Improving Working Conditions for U.S. Farmworkers and Food Production Workers
- APHA Policy Statement 201511: Impact of Preemptive Laws on Public Health
- APHA Policy Statement 201210: Promoting Health Impact Assessment to Achieve Health in All Policies
- APHA Policy Statement 20126: Anticipating and Addressing Sources of Pollution to Preserve Coastal Watersheds, Coastal Waters, and Human Health
- APHA Policy Statement 201110: Ending Agricultural Exceptionalism: Strengthening Worker Protection in Agriculture Through Regulation, Enforcement, Training, and Improved Worksite Health and Safety
- APHA Policy Statement 20098: Opposition to the Use of Hormone Growth Promoters in Beef and Dairy Cattle Production
- APHA Policy Statement 200712: Toward a Healthy Sustainable Food System
- APHA Policy Statement 200413: Helping Preserve Antibiotic Effectiveness by Demanding Meats Produced Without Excessive Antibiotics

- APHA Policy Statement 20037: Precautionary Moratorium on New Concentrated Animal Feed Operations

- APHA Policy Statement 200112: Discontinuing the Use of Fluoroquinolone Antibiotics in Agriculture

Problem Statement

Over the last several decades, food animal production in the United States has shifted from an extensive system of small and medium-sized farms to one characterized primarily by large-scale industrial operations that concentrate large numbers of animals in small geographic areas.[1] These operations function with high throughput and rapid turnover fueled by specially formulated animal feeds, pharmaceutical inputs, mechanization of production, and highly specialized animal breeds. This production model is known as industrial food animal production (IFAP).[2] The Centers for Disease Control and Prevention has determined that these operations pose risks to public health and the environment.[3]

In addition, food animal production has become a vertically integrated system, particularly in the swine and poultry industries.[2] In this model, a processing company, known as an integrator, owns and controls all stages of the production process, from the animals to the feed to the slaughterhouses. The farmer, or grower, contracts with the integrator to raise the animals and is responsible for capital investments of equipment and facilities, as well as the management and disposal of animal waste. Growers often have little market power and little to no autonomy over their farming operations.[1] Accompanying the trends of vertical integration and concentration of animals is the consolidation of the livestock and poultry industries, with operations becoming larger in size and fewer in number than in years past.[4] For example, over the last five decades, the average number of hogs per farm has increased from 37 to 1,044, while the number of hog farms has decreased from 1.85 million to 63,000.[5]

IFAP facilities, depending on their size and production methods, may be considered animal feeding operations or concentrated animal feeding operations (CAFOs) by the Environmental Protection Agency (EPA). The EPA defines animal feeding operations as facilities where “animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.”[6] To be considered a large CAFO, the facility must house at least 1,000 beef cattle, 700 dairy cows, 2,500 hogs, 125,000 broiler hens, or 82,000 laying hens,[7] although the average size of these facilities is much greater. One report revealed, for example, that the average cattle feedlot held 4,300 animals, and in some states the average poultry operation exceeded 500,000 birds.[8] CAFOs smaller than those designated as large by the EPA are regulated in the same way if they are determined by permitting authorities to be significant contributors of pollutants.[7] While the EPA has precise definitions for CAFOs, the term CAFO in this statement refers to operations that employ the IFAP methods and practices just described.

Raising animals in large, high-density operations leads to the routine accumulation of large volumes of animal waste, often at rates far exceeding the capacity of nearby farmland to absorb it.[9] As a result, these operations represent a significant public health and ecological hazard because the excess waste they produce is disposed of in a manner that can pollute surface and groundwater resources.[9] In the United States, CAFOs produce an estimated 369 million tons of animal manure a year, approximately 13 times the sewage produced by the U.S. population.[8] This animal waste is typically stored in open or covered pits or liquid lagoons and later spread or sprayed untreated on nearby cropland, posing additional risks to public health.[1] Workers in animal production can be exposed to airborne waste particles, drug residues, heavy metals, potentially harmful pathogens, and antibiotic-resistant bacteria, many of which can be transferred into neighboring communities by these workers.[9,10] In addition, people living near CAFOs may have an increased risk of infection owing to the transmission of harmful microbes from CAFOs via flies or contaminated water and air.[10]

Close proximity to CAFOs is frequently associated with declines in local economic and social indicators (e.g., business purchases, infrastructure, property values, population, social cohesion), which undermine the socioeconomic and social foundations of community health,[11] often in poor and African American rural communities.[12] There are disproportionate negative health impacts associated with CAFOs on low-income, disadvantaged, and economically distressed communities, as well as communities that are heavily dependent on groundwater and have high proportions of ethnic and racial minority residents, raising serious environmental justice concerns.[11–13] In addition, studies have shown that CAFOs are clustered in areas near low-income and non-White schools.[14,15] Also, low wages, lack of healthy food options, and poor access to medical care may intensify

the burden of disease in these communities.[13] Moreover, the negative health and environmental impacts associated with CAFOs can become concentrated in these communities due to their limited economic and political resources to address problems.[13]

In addition, while CAFOs produce large quantities of meat and other animal-source foods such as milk, eggs, cheese, and yogurt, their relatively low retail costs obscure the upstream, higher costs of industrial production. Externalized impacts, including environmental degradation and negative health effects associated with CAFOs as well as taxpayer subsidies, cost the American public billions of dollars annually.[16,17] Some of these externalized impacts include lower property values in communities located near CAFOs, costs associated with treating antibiotic-resistant disease, and costs associated with the cleanup and prevention of air and water pollution.[16] Externalized costs of CAFOs also include those associated with climate change.[17] Livestock production is the largest source of food system–related greenhouse gas emissions, accounting for an estimated 14.5% of such emissions worldwide.[18] Studies have also shown that meat and dairy from ruminant animals are particularly emissions intensive.[19]

Although animal manure is an invaluable fertilizer, waste quantities of the magnitude produced by CAFOs represent a public health and ecological hazard through the degradation of surface and groundwater resources.[9] CAFO-generated manure has constituents and byproducts of health concern, including antibiotics, pathogens, bacteria, hormones, nitrogen, and phosphorus.[9] Manure from these operations can contaminate ground and surface waters with nitrates, drug residues, and other hazards,[9] and studies have demonstrated that humans can be exposed to waterborne contaminants from livestock and poultry operations through the recreational use of contaminated surface water and the ingestion of contaminated drinking water.[20,21] This is of particular concern for the 34.2 million Americans, approximately 11% of the population, who rely on private wells for drinking water and household use,[22,23] as private wells are not monitored by government agencies to ensure safe levels of pathogens.[24] Manure storage systems, such as liquid lagoons or cess pits, are also vulnerable to breaches during heavy rainfall and flooding events, increasing the risk of environmental contamination.[21] This is particularly concerning given that extreme weather events are predicted to increase in frequency and severity over the coming decades.[25]

Pathogens in manure that are capable of causing severe gastrointestinal disease, complications, and sometimes death in humans include Campylobacter and Salmonella species, as well as Listeria monocytogenes, Yersinia enterocolitica, fecal coliforms such as Escherichia coli, and the protozoa Cryptosporidium parvum and Giardia lamblia.[9] Studies have linked human disease outbreaks involving these pathogens to livestock waste.[26,27] Of additional concern is exposure to pathogens that are resistant to antibiotics used in human medicine. Administering antibiotics to animals at levels too low to treat disease fosters the proliferation of antibiotic-resistant pathogens.[2] There is scientific consensus that antibiotics administered to food animals contribute to antibiotic resistance in humans.[1,2] More than 12 million pounds of antibiotics important to human medicine are sold annually for use in food animal production in the United States.[28] This represents 64% of all sales of these precious drugs, including for use in treating people.[29] U.S. food animal production uses these antibiotics at nearly twice the intensity (measured as milligrams of antibiotic active ingredient per kilogram of meat produced) as the collective livestock industries in 30 European countries.[30,31] In the United States, these antibiotics are used to treat or control disease and to prevent disease in animals without any clinically diagnosed disease to compensate for the overcrowded, poor environmental conditions characteristic of industrial animal agriculture.[2,32] Current APHA policy statements (201712, 20098, and 200712) register appropriate concern about agricultural use of medically important antibiotics.[33–35]

Studies have demonstrated that antibiotic-resistant pathogens are found in animal operations that administer antibiotics for purposes other than treating or controlling veterinarian-diagnosed disease[36] and are also found in the environment in and around production facilities.[37–40] Pathogens can spread from animal production operations to surrounding communities, exposing workers, their family members, and community members to these resistant pathogens.[41,42] In addition, numerous studies have shown that industrial food animal production workers and their family members, as well as those who are in residential proximity to CAFOs, face increased risk of antibiotic-resistant infections. A North Carolina study of industrial hog operation workers revealed that workers with nasal carriage of multidrug-resistant Staphylococcus aureus and livestock-associated Staphylococcus aureus were 8.8 and 5.1 times more likely to report recent skin and soft tissue infections than non-carriers, respectively.[43] Additional studies have shown that residential proximity to CAFOs is associated with increased risks of antibiotic-resistant infection[44] and colonization.[45] Resistant infections in humans are more difficult and expensive to treat[46] and more often fatal[47] than infections with non-resistant strains.

Furthermore, land application of manure in excess of the land's absorptive capacity can lead to excess nitrogen and phosphorus in soil, water resource pollution, eutrophication of surface waters, and algae overgrowth, including some algae producing human toxins.[9]

Exposure to elevated levels of nitrates in drinking water is associated with adverse health effects such as cancer, birth defects and other reproductive problems, thyroid problems, and methemoglobinemia (blue baby syndrome).[48] In addition, exposure to algal toxins has been linked to adverse health effects including gastrointestinal illness, liver inflammation and failure, severe dermatitis, respiratory paralysis, cardiac arrhythmia, and tumor promotion.[9]

Workers and community members living near CAFO operations also face increased exposure to air pollution from these operations, which can cause or exacerbate respiratory conditions including asthma,[49] eye irritation, difficulty breathing, wheezing, sore throat, chest tightness, nausea,[50] bronchitis, and allergic reactions.[49] Toxic air emissions include particulates, volatile organic compounds, and gases such as hydrogen sulfide and ammonia.[51] One Pennsylvania study showed that living in close proximity to poultry operations may increase the risk of community-acquired pneumonia,[52] and another study in that state revealed an association between proximity to industrial animal agriculture operations and clinically documented asthma exacerbations.[53] Odors associated with air pollutants from large-scale hog operations have been shown to interfere with daily activities, quality of life, social gatherings, and community cohesion[11] and to contribute to stress and acute increased blood pressure.[54] It is important to note that many of these risks are borne disproportionately by low-income, minority communities where, research has shown, CAFOs are often clustered.[14,15,55]

Evidence-Based Strategies to Address the Problem

While some federal, state, and local CAFO regulations exist, they are not sufficiently enforced and contain loopholes and deficiencies that limit their capacity to protect human and environmental health.[2] Many CAFOs are exempted from regulation, and monitoring and inspection are insufficient.[2] For example, CAFOs are exempt from hazardous air emissions reporting requirements under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the EPA does not require reporting of air emissions from animal agriculture under the Emergency Planning and Community Right-to-Know Act (EPCRA).[56] Thus, the public is ill informed about the categories and quantities of hazardous substances released by CAFOs. In addition, as outlined in APHA Policy Statement 201511, preemption laws related to animal agriculture can prevent local governments from enacting ordinances to protect environmental and public health from CAFO air and water pollution.[57] This means local residents have little authority over the governance of CAFOs once they have been established in an area. Finally, the Safe Drinking Water Act does not apply to private wells, the EPA does not regulate private groundwater wells, and the Clean Water Act applies only to navigable, or surface, waters.[58–60] In light of these exemptions and loopholes, some states have proposed, and one has passed, CAFO moratoria in order to protect public health and the environment.[61,62]

Existing regulations must be strengthened, enforced, and applied to all CAFOs, as described below in the action steps, in order to adequately protect human and environmental health. Until such a time that this occurs, a moratorium on new and expanding CAFOs should be established.

Opposing Arguments

Without accounting for externalized costs, it can be argued that greater economies of scale can be achieved when raising large numbers of animals in CAFOs due to higher efficiencies and lower costs per unit.[2] A number of factors, including efficient animal feeding and housing, specialization of animals for food production, and large facility sizes, allow CAFOs to supply large quantities of animal-sourced foods such as milk, eggs, and meat.[1] CAFO technologies and practices that have reduced operating costs can mean bigger profits on less land and capital, and livestock systems have a global asset value of at least $1.4 trillion, providing food for individuals throughout the world.[1,63] In addition, animal manure, when applied appropriately, can be an effective, low-cost fertilizer for crops.[9] When CAFOs are being considered in particular areas, it is often argued that they can benefit the local economy by increasing demand for local materials and feed and can stimulate an increase in employment.[1] It is also argued that increased tax expenditures related to CAFOs will translate into greater funding for schools and infrastructure.[1]

As discussed earlier, however, the apparently low retail price tag for grocery items produced in CAFOs is due in large part to the substantial health and environmental costs of this production that have been “externalized” or deliberately ignored by this system. Rather than being the responsibility of CAFO operators, billions of dollars of these health and environmental costs have been paid by the American public each year.[16,17] In addition, the vertically integrated model characteristic of CAFOs has been found to contribute less to local economies than locally owned and controlled farms.[2] CAFO integrators are often not rooted in the local farming community, and thus profits from CAFO businesses leave the community.[2] In the United States (where the proposed moratorium would take effect), meat is consumed at more than three times the global average, which enhances the risk of chronic illness and has major negative consequences with respect to land use, water use,

and environmental change.[64] Also, as CAFOs are established and expanded in communities, the operations often rely more on technology than on additional labor to function, and as a result fewer jobs are available to local people.[2] In addition, the jobs that are available are often low paid and itinerant and filled by migrant laborers willing to work for low wages.[2] Furthermore, the potential for economic benefits should not be prioritized at the expense of human and environmental health. As described in the problem statement, wide-ranging human and environmental health impacts such as air and water pollution, environmental degradation, increased risk of exposure to pathogens, and increased risk of antibiotic resistance result from CAFO establishment and expansion.

Action Steps

In light of the wide-ranging negative health and environmental impacts associated with CAFOs, as well as serious environmental justice concerns, APHA urges federal, state, and local governments and public health agencies to impose a moratorium on new and expanding CAFOs until additional scientific data on the attendant risks to public health have been collected, uncertainties have been resolved, and the following action steps have been taken:

1. The federal government brings the use of medically important antibiotics in U.S. poultry and livestock production into compliance with the 2017 recommendation of the World Health Organization that producers stop using these precious antibiotics in healthy animals.[65] Federal regulators should end approval of such drug use in food-producing animals for the prevention of infectious diseases where disease has not been clinically diagnosed. This approval practice is currently allowed and is deemed "therapeutic" by the Food and Drug Administration.

2. The federal government removes CAFO exemptions from reporting of environmental emissions of hazardous materials under CERCLA and EPCRA reporting requirements.

3. The federal government enforces the Clean Water Act as it pertains to CAFOs.

4. The federal government strengthens CAFO regulations under the Clean Air Act by developing mechanisms to better monitor air emissions and collecting air emissions data to improve understanding of community exposure risks.

5. The federal government and state governments prohibit the installation of new liquid manure handling systems, including waste lagoons, and phase out their use in existing operations to reduce the risk of public health and environmental disasters.

6. The federal government government and state governments, in coordination with the National Pollutant Discharge Elimination System and Natural Resources Conservation Service Comprehensive Nutrient Management Plans, develop and implement strict oversight protocols for the application of dry manure so that it does not exceed agroeconomic standards.

7. develops baseline federal zoning guidelines for food animal production facilities that set a framework for states and require a rigorous, pre-permit environmental impact study and a health impact assessment; such requirements should not prevent states and counties from enacting more comprehensive zoning laws. Impact studies should include assessments of the cumulative effects of food animal production facilities located in vulnerable low-income, minority, and economically distressed communities.

8. The federal government removes exemptions for agricultural operations from the Occupational Safety and Health Act, including exempting agricultural operations from inspection and enforcement of labor laws based on their number of employees.

9. The federal government and state governments increase funding for research on and dissemination of food animal production practices that will be beneficial to the environment, public health, and rural communities and offer funding and technical assistance to farmers to adopt these practices.

10. The federal government eliminates waste management subsidies CAFOs receive under the Environmental Quality Incentive Program (EQIP).

11. The federal government directs EQIP funding and Farm Service Agency loans to small and medium-sized operations rather than CAFOs and requires a rigorous environmental and public health assessment as part of the approval process.

12. The federal government addresses environmental equity issues in permitting decisions for projects with the potential to disparately impact communities protected by Title VI of the Civil Rights Act of 1964.

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